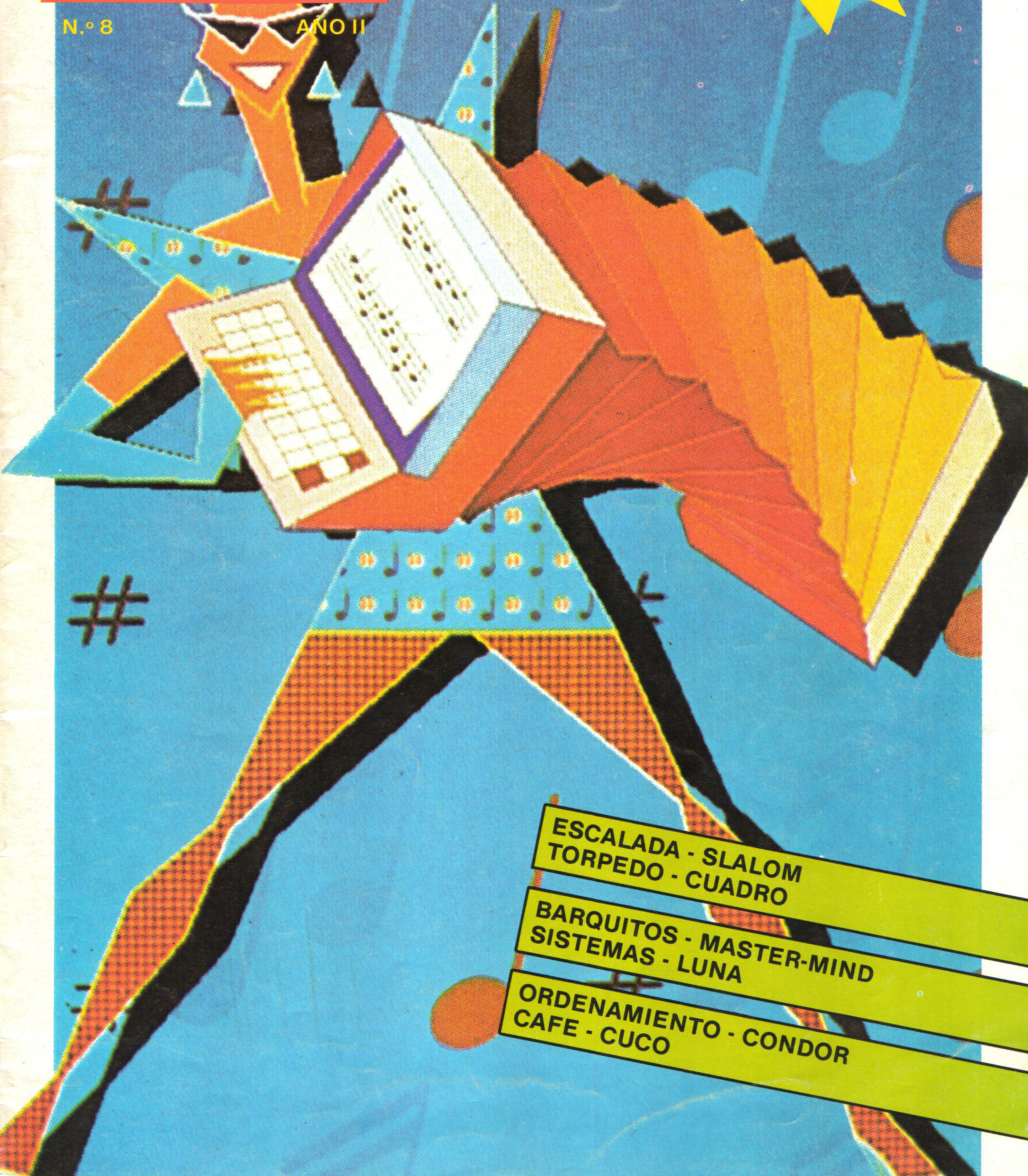
AMIGOS DEL MSX

N.º 8 AÑO II

295 PTS.



ESCALADA - SLALOM
TORPEDO - CUADRO

BARQUITOS - MASTER-MIND
SISTEMAS - LUNA

ORDENAMIENTO - CONDOR
CAFE - CUCO

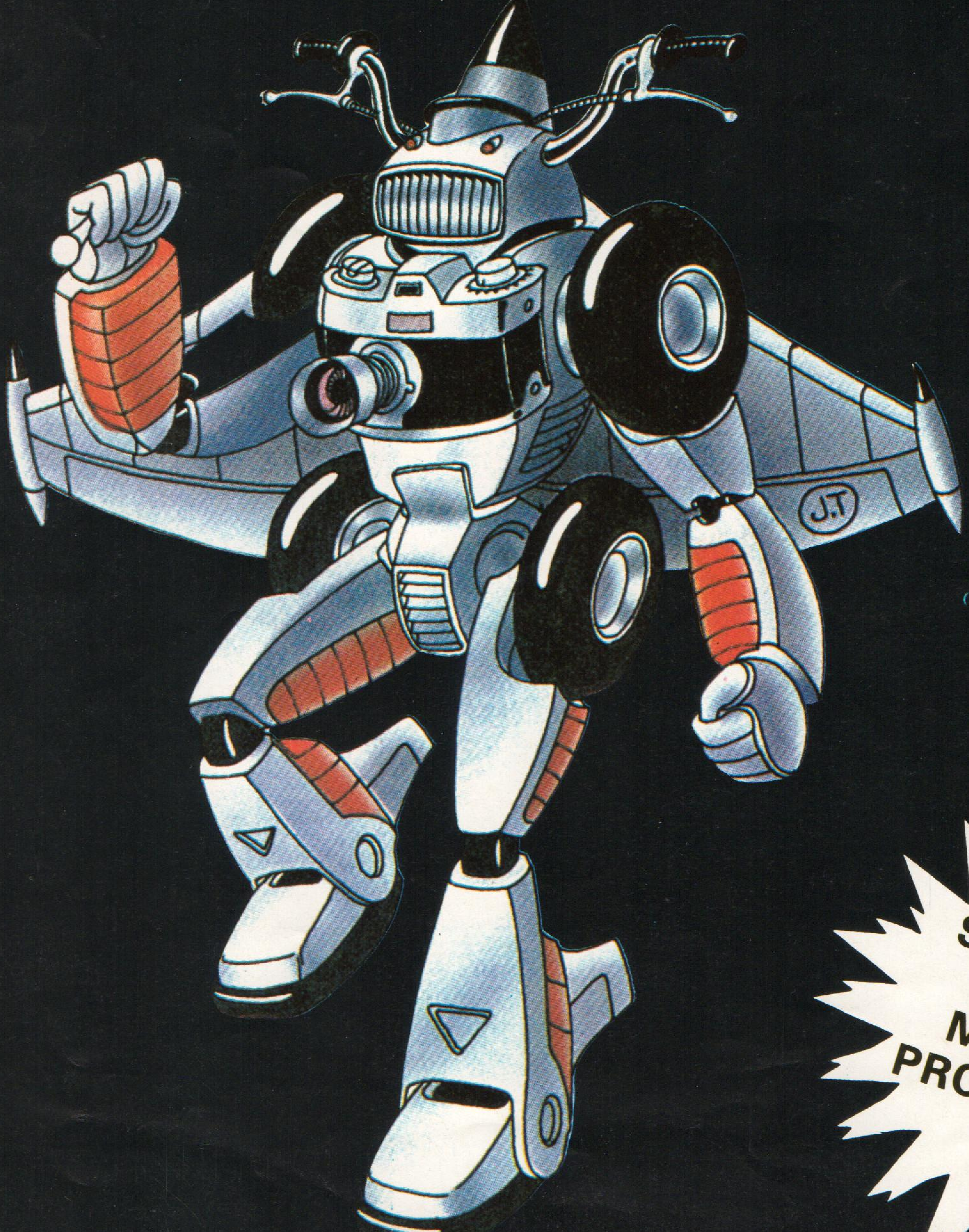
MSX

Nº 17

690 Ptas.

SOFTWARE

EL SALTARIN



SELECCION
DE LOS
MEJORES
PROGRAMAS

AMIGOS DEL
MSX

SUMARIO

ESCALADA

SLALOM

TORPEDO

CUADRO

BARQUITOS

MASTER-MIND

SISTEMAS

LUNA

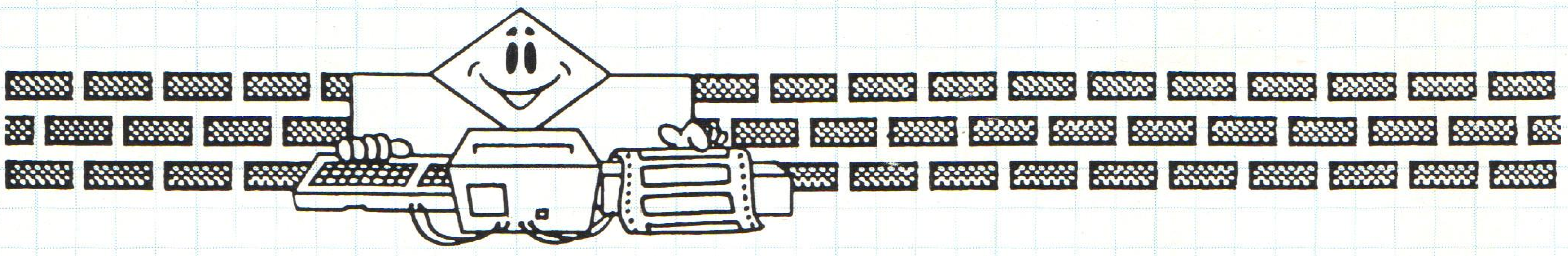
ORDENAMIENTO

CONDOR

CAFE

CUCO

Edita: Editorial GTS. C/. Bailén, 20. 1.º Izda. 28005 MADRID. **Secretaria Redacción:** Margarita Rancero. **Colaboradores:** Eugenio Garrido, J.F. Martínez, J. Bernal, R. Carralón, J. Ramos, Juan Jesús Ortega. **Dirección Artística y Técnica:** Carlos Gorrindo. **Publicidad:** Bailén, 20. 1.º. 28005 MADRID. **Imprime:** GREFOL, S. A., Pol. II , La Fuensanta, Móstoles (Madrid). **Distribuye:** R.B.A. Promotora de Ediciones, S. A. Trav. de Gracia, 56. Atico 1.ª. Teléfono: 200 82 56. **Depósito Legal:** M. 3.988-1986.

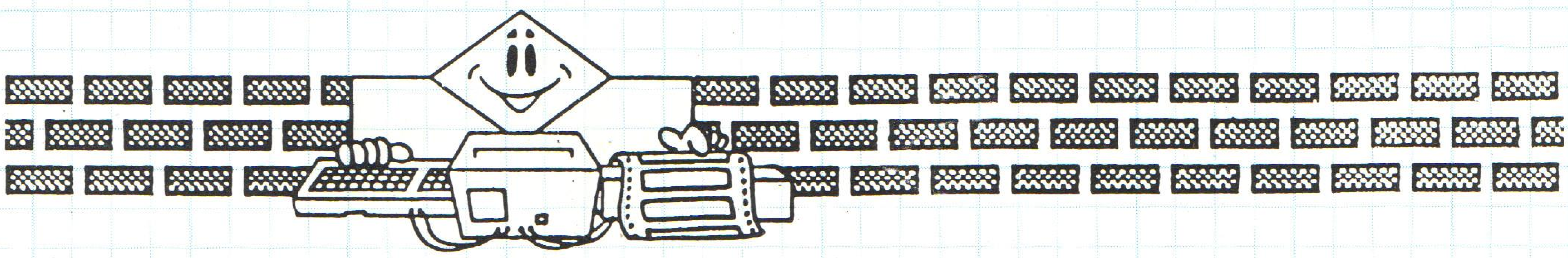


EXPLICACION DE LOS PROGRAMAS

ESCALADA

```
10 '
20 '
30 '      Escalada
40 '
50 '
60 '
70 'LUIS SANGUINO ARIAS
80 '
90 '          1986
100 '
110 '
120 COLOR 1,3,10
130 SCREEN 3
140 OPEN"GRP:"AS#1
150 PSET(40,80),3:PRINT#1,"CUESTA"
160 FOR Y=1 TO 1500:NEXT
170 CLOSE
180 COLOR 1,14
190 SCREEN 1
200 LOCATE 3,10:PRINT"JOTSTICK O CURSOR(J/C)"
210 X$=INKEY$
220 I=I+1:IFI>13 THEN I=1
230 VDP(7)=I
240 IF X$="J"OR X$="i" THEN CT=1:GOTO270
250 IF X$="c"OR X$="C" THEN CT=0:GOTO270
260 GOTO 210
270 COLOR 1,15,8:SCREEN 2,2,1
280 OPEN"GRP:"AS#1
290 DRAW"C3BM0,180R29U21E25R19E4U20E12R37E18R15E6U20R16E20U1R16E5U15R11E16U1D1
300 PAINT (1,191),3
310 FOR K=1 TO 7 :B$="":FORI=1TO 32 :READ A$:B$=B$+CHR$(VAL("&H"+A$)):NEXT:SPRIT
E$ (K)=B$:NEXT
320 VI=5
330 GOSUB 750
340 X=5:Y=164
350 A=1:B=2:PX=240:PY=-4:E=6:G=7
360 ON SPRITE GOSUB 590
```

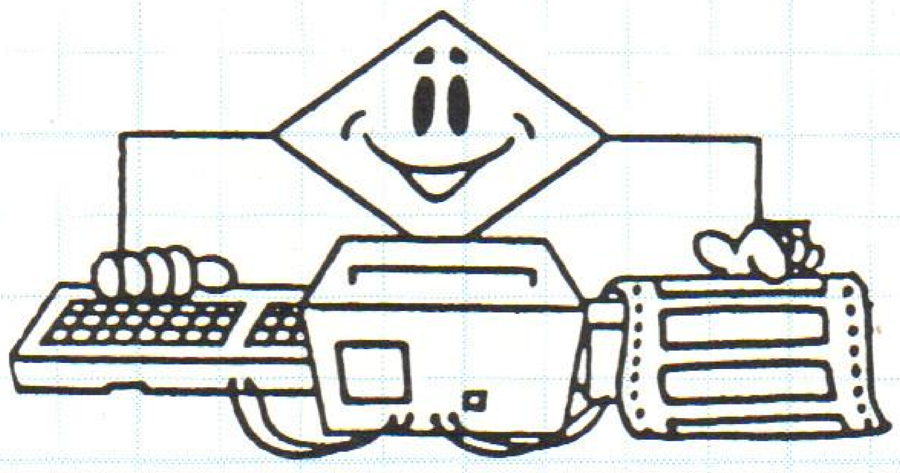
```
370 PX=PX-4:PY=PY+4
380 IF POINT(PX+8,PY+26)<>3 THEN PY=PY+3
390 IF POINT(PX+8,PY+18)=3 THEN PY=PY-3:PX=PX-3
400 IF PX<=0 THEN PY=-4:PX=240
410 IF F=0 THEN PUTSPRITE 1,(X,Y),1,A
420 IF F=1 THEN PUTSPRITE 1,(X,Y), 1, C
430 IF F=2 THEN PUTSPRITE 1,(X,Y), 1, 5
440 PUTSPRITE 2,(PX,PY), 6, E
450 GOSUB 490
460 IF MM=0 THEN SPRITE ON
470 SWAP E,G
480 GOTO 370
490 IF MM=0 THEN S=STICK(CT)
500 IF S=3 THEN X=X+2:Y=Y-2:SWAP A,B:F=0
510 IF S=7 THEN X=X-2:Y=Y+2:SWAP C,D:F=1
520 IF S=5 THEN F=2
530 IF POINT(X+12,Y+16)<>3 THEN Y=Y+2
540 IF POINT(X+12,Y+14)=3 THEN Y=Y-2
550 IF Y<=-8 THEN 630
560 IF X<=0 AND MM=1 THEN MM=0 :GOSUB 750
570 IF X<=0 THEN X=0
580 RETURN
590 SPRITE OFF
600 VI=VI-1
610 MM=1:S=7:D=3:C=5:PY=209
620 RETURN
630 PU=PU+100:BEEP:BEEP:BEEP
640 LINE (70,180)-(180,192),15,BF
650 PSET(76,182),15:PRINT#1,"PUNTOS=";PU
660 GOTO 340
670 SCREEN 1:KEYOFF
680 LOCATE 8,10:PRINT"HAS MUERTO"
690 LOCATE 3,15:PRINT"TUS PUNTOS HAN SIDO=";PU
700 LOCATE 1,20:PRINT"OTRA PARTIDA SI O NO [S/N]"
710 X$=INKEY$
720 IF X$="S"OR X$="s"THEN CLEAR:GOTO 270
730 IF X$="n"OR X$="N"THEN SCREEN 0:END
740 GOTO 710
750 LINE(80,0)-(155,10),13,BF
760 PSET(86,2),3:PRINT#1,"VIDAS=";VI
770 IF VI=0 THEN 670
780 C=3:D=4:F=2
790 IF BB=0 THEN BB=1:F=0
800 RETURN
810 DATA 1,3,3,1,0,1,1,1,3,5,1,2,4,38,20,0,80,C0,E0,C0,80,80,80,F0,80,80,80,40,2
0,10,10,18
820 DATA 1,3,3,1,0,1,1,1,1,3,5,1,1,1,1,1,80,C0,E0,C0,80,80,80,80,C0,A0,90,40,40,
40,40,80
830 DATA 1,3,7,3,1,1,1,F,1,1,1,2,4,8,8,18,80,C0,C0,80,0,80,80,80,C0,A0,80,40,20,
1C,4,0
840 DATA 1,3,7,3,1,1,1,1,3,5,9,2,2,2,2,1,80,C0,C0,80,0,80,80,80,80,C0,A0,80,80,8
0,80,80
850 DATA0,0,0,0,0,0,0,0,0,0,0,E3,9F,7,E8,90,0,0,0,0,0,0,0,0,0,0,C,CE,FF,CE,44,30
860 DATA0,1,7,F,F,1B,37,37,6F,6F,37,1B,F,F,1,0,0,80,80,C0,C0,E0,F0,70,B8,D8,F8,F
0,F0,E0,80,0
870 DATA 0,1,F,F,1B,37,6F,6F,37,37,1B,F,F,7,1,0,0,80,E0,F0,F0,F8,D8,B8,70,F0,E0,
C0,C0,80,80,0,0
```

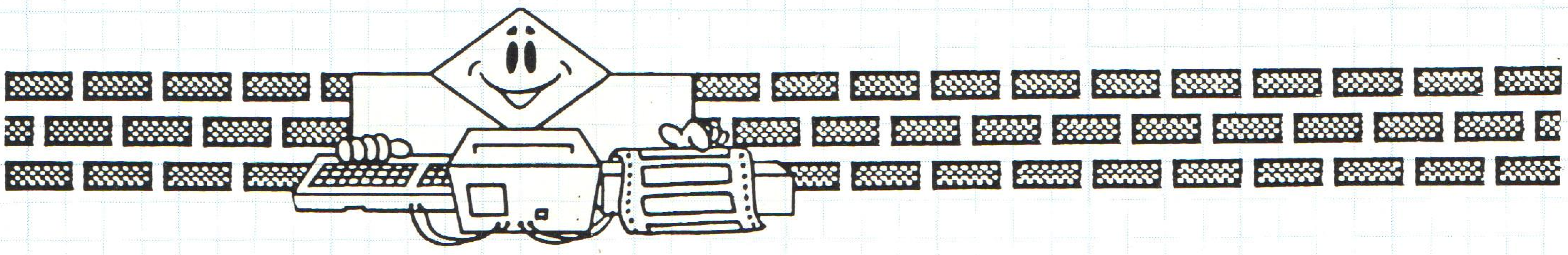


SLALOM

```
10 '
20 '
30 '       Slalom
40 '
50 '
60 '
70 'LUIS SANGUINO ARIAS
80 '
90 '          1986
100 '
110 '
120 CLEAR:COLOR 3,6,10
130 SCREEN 3
140 OPEN"GRP:"AS#1
150 PSET(40,80),6:PRINT#1,"SLALOM"
160 FOR Y=1 TO 1500:NEXT
170 CLOSE
180 COLOR 1,7,13:SCREEN 2,2,1
190 DRAW"C15BM0,25F65R29F1D85R162U1BM0,19C7R2E8R14F28R5E24F5E6F11U8E7F39D9F9E39F
4U1E6R1D5U1E8D2F3U1E7F23D12U13"
200 PAINT (1,1),7
210 PAINT (1,191),15
220 B$="":FOR K=1 TO 3 :B$="":FORI=1TO 32 :READ A$:B$=B$+CHR$(VAL("&H"+A$)):NEXT
:SPRITE$ (K)=B$:NEXT
230 OPEN"GRP:"AS#1
240 G=.05
250 SOUND 6,15:SOUND 7,7:SOUND 8,16:SOUND 9,16:SOUND 10,16:SOUND 11,0 :SOUND 12,
16:SOUND 13,0
260 ON,STRIG GOSUB 770
270 X=0:Y=7:A=2:B=3
280 Y=Y+1
290 STRIG(0) ON
300 Y=Y+1
```

```
310 PUTSPRITE 1 ,(X,Y), 1, 1
320 PUTSPRITE 2 ,(X,Y+16),1,A
330 IF X>95 THEN Y=(Y+(1/G))
340 IF Y>155 THEN 400
350 IF Y>60 THEN A=B:GOTO 300
360 GOTO 280
370 STRIG(0) OFF
380 G=G+ 1
390 RETURN
400 J=J+1
410 A(J)=X
420 IF A(J)>JJ THEN JJ=A(J)
430 LINE (60,0)-(200,10),15,BF
440 PSET(66,3),15:PRINT#1,"ULTIMO SALTO=";X
450 FOR I=1 TO 100:BEEP:NEXT
460 LINE (60,0)-(200,10),15,BF
470 PSET(70,3),7:PRINT#1,"MEJOR SALTO=";JJ
480 FOR I=1 TO 1000:NEXT
490 IF J>4 THEN 510
500 GOTO 240
510 COLOR 1,15,4
520 SCREEN 1:KEY OFF
530 LOCATE 7,10:PRINT"TU MEJOR SALTO"
540 LOCATE 5,13:PRINT"HA SIDO=";JJ;"METROS"
550 LOCATE 1,20:PRINT"OTRA PARTIDA SI O NO [S/N]"
560 X$=INKEY$
570 IF X$="S" OR X$="s"THEN RUN
580 IF X$="n" OR X$="N"THEN CLS:SCREEN 0:END
590 GOTO 560
600 DATA0,1,3,3,3,1,3,7,7,7,7,7,3,3,7,7,80,C0,C0,E0,C0,80,80,C0,C0,C0,E0,B0,98,C
,84,98,7,7,1,0,21,12,8,5,3,1,0,0,0,0,0,0,90,E0,E0,F0,30,60,C0,80,80,60,80,40,20,
10,C,0
610 DATA7,7,3,3,3,3,6,6,C,C,1C,1E,FF,0,0,0,88,88,8,8,8,8,8,8,1C,8,0,4,F8,0,0,0
```





TORPEDO

```
10 REM
20 REM        PROGRAMA: TORPEDO
30 REM
40 REM       LUIS SANGUINO  1986
50 REM
60 REM
70 REM
80 REM         ROTULO DEL TITULO
90 REM
100 COLOR 6,7,11
110 CLS: SCREEN 3,0
120 OPEN"GRP:"AS#1
130 PSET(25,80),7
140 PRINT#1,"TORPEDO"
150 CLOSE
160 FOR I=1 TO 1600:NEXT I
170 SCREEN 1:KEY OFF
180 LOCATE 1,4:PRINT"PULSA 0 PARA TECLADO"
190 LOCATE 1,6:PRINT"      1 PARA JOYSTICK-1"
200 LOCATE 1,8:PRINT"      2 PARA JOYSTICK-2";
210 INPUT JT:IF JT>2 OR JT<0 THEN 210
220 REM
230 REM      DATAS DE LOS SPRITES        106 REM
240 DATA 00000000
250 DATA 00001000
260 DATA 00001000
270 DATA 11111111
280 DATA 01111011
290 DATA 00001111
300 DATA 00000001
310 DATA 00000000
320 DATA 00001110
330 DATA 00001111
340 DATA 00001101
350 DATA 11111111
360 DATA 10111011
370 DATA 11111111
380 DATA 11111111
390 DATA 00011111
```

```
400 DATA 00000000
410 DATA 00001110
420 DATA 10010000
430 DATA 11111111
440 DATA 00000110
450 DATA 11001100
460 DATA 11111000
470 DATA 11110000
480 DATA 00100001
490 DATA 00100000
500 DATA 11111111
510 DATA 11101101
520 DATA 00111111
530 DATA 00001111
540 DATA 00000011
550 DATA 00000000
560 DATA 11111111
570 DATA 00110110
580 DATA 11111111
590 DATA 10110110
600 DATA 11111111
610 DATA 11111111
620 DATA 11111111
630 DATA 00111111
640 DATA 11111100
650 DATA 10110000
660 DATA 11111111
670 DATA 11011011
680 DATA 11111111
690 DATA 11111111
700 DATA 11111111
710 DATA 11111111
720 DATA 00011100
730 DATA 00100000
740 DATA 11111111
750 DATA 11001110
760 DATA 11001100
770 DATA 11111000
780 DATA 11110000
790 DATA 11110000
800 DATA 10001000
810 DATA 10011100
820 DATA 11110000
830 DATA 11011000
840 DATA 11111111
850 DATA 10011000
860 DATA 11110000
870 DATA 11001000
880 DATA 01011010
890 DATA 01011010
900 DATA 01011010
910 DATA 01011010
920 COLOR 1,7,11
930 REM
```

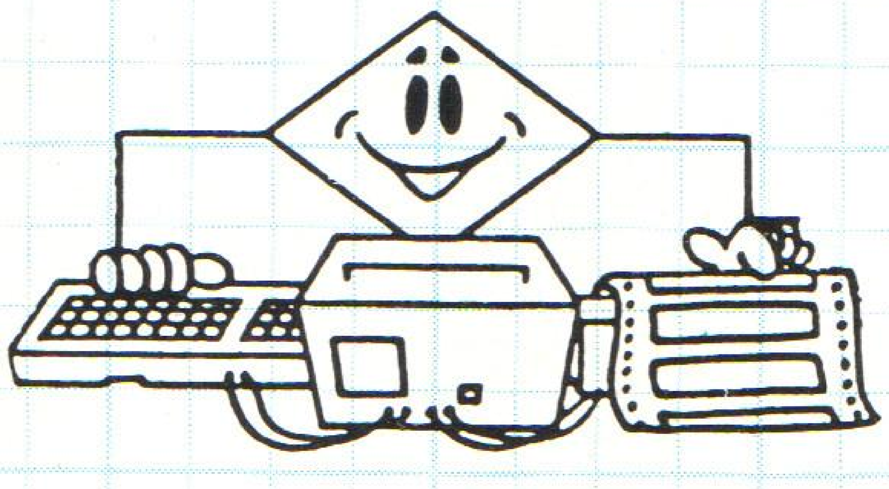
```
940 REM      CREACION DE SPRITES
950 REM
960 CLS: SCREEN 2,0
970 DEFINT X,Y,W,Z,B,H,C,D,V,F
980 FOR I1=1 TO 8
990 READ C$
1000 S$=S$+CHR$(VAL("&B"+C$))
1010 NEXT I1
1020 FOR I2=1 TO 8
1030 READ D$
1040 T$=T$+CHR$(VAL("&B"+D$))
1050 NEXT I2
1060 FOR I3=1 TO 8
1070 READ E$
1080 U$=U$+CHR$(VAL("&B"+E$))
1090 NEXT I3
1100 FOR I4=1 TO 8
1110 READ F$
1120 V$=V$+CHR$(VAL("&B"+F$))
1130 NEXT I4
1140 FOR I5=1 TO 8
1150 READ G$
1160 W$=W$+CHR$(VAL("&B"+G$))
1170 NEXT I5
1180 FOR I6=1 TO 8
1190 READ H$
1200 R$=R$+CHR$(VAL("&B"+H$))
1210 NEXT I6
1220 FOR I7=1 TO 8
1230 READ I$
1240 Y$=Y$+CHR$(VAL("&B"+I$))
1250 NEXT I7
1260 FOR I8=1 TO 8
1270 READ I1$
1280 Z$=Z$+CHR$(VAL("&B"+I1$))
1290 NEXT I8
1300 FOR I9=1 TO 4
1310 READ J$
1320 K$=K$+CHR$(VAL("&B"+J$))
1330 NEXT I9
1340 REM
1350 REM       DATOS INICIALES Y
1360 REM       DIBUJOS DEL FONDO
1370 REM
1380 OPEN"GRP:" AS #1
1390 P$="1J5"
1400 Y1=120
1410 CIRCLE (200,25),12,11
1420 PAINT (200,30),11
1430 CIRCLE (160,20),5,15
1440 CIRCLE (156,15),3,15
1450 CIRCLE(150,20),4,15
1460 PAINT (150,20),15
1470 PAINT (160,20),15
```

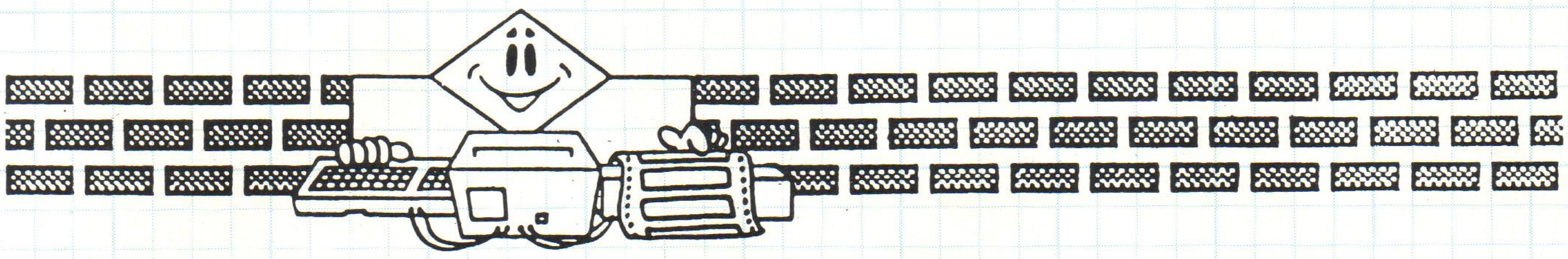
```
1480 PAINT (156,15),15
1490 PSET(205,23),15
1500 DRAW"E2R2E1R2E1R2E1R6F2R2E2R1F2R3F2D1G1L3H2L4G2D1L2H2U3G1H1D1L4D2L5G1H2"
1510  PAINT(223,22),15
1520 LINE(0,30)-(255,192),4,BF
1530 PSET(25,192),12
1540 DRAW"U4E2U2E1U2E1U4E2U4F2D4G2D3G1D4G2D4"
1550 PAINT(26,190),12
1560 PSET(105,192),12
1570 DRAW"U4E2U2E1U2E1U4E2U4F2D4G2D3G1D4G2D4"
1580 PAINT(106,190),12
1590 PSET(205,192),12
1600 DRAW"U4E2U2E1U2E1U4E2U4F2D4G2D3G1D4G2D4"
1610 PAINT(206,190),12
1620 LINE(0,188)-(255,192),12,BF
1630 FOR Y=1 TO 255 STEP 10
1640 LINE(Y,183)-(Y+3,190),12
1650 LINE(Y+2,181)-(Y+2,190),12
1660 NEXT Y
1670 PSET(0,0),7
1680 PRINT#1, "ANGULO=";A
1690  PSET(80,0),7
1700 PRINT#1, "DISTANCIA=";B$
1710 B=VAL(B$)
1720 PSET(190,0),7
1730 PRINT#1,"HUND=";P
1740 IF P=25 GOTO 3170
1750 GOSUB 2790
1760 W=25:W2=25:W1=25:W3=25
1770 W5=175:W6=35
1780 H=0:Z=0:A=0:Z1=0:H5=0
1790 REM
1800 REM         BUCLE PRINCIPAL
1810 REM
1820 FOR X=1 TO 255
1830 IF H=1 THEN LINE(X8-6,W5-2)-(X8+6,W5+6),4,BF
1840 IF H2=1 THEN CIRCLE (X4,36),1,4:H2=0
1850  IF X1>X THEN X2=X1-X:C1=-3 ELSE X2=X-X1:C1=3
1860 Z=Z+1:Z1=Z1+1
1870 REM      TORPEDO
1880 REM
1890 IF H=1 THEN X8=X8+C1:W5=W5-3:CIRCLE(X8,W5),2,15,,,7
1900 IF X8-5<=X AND X8+5>=X THEN X8=X
1910 IF W5<=37 AND X8=X THEN C=X-2:V=28:P=P+1:GOTO 3010
1920 IF W5<=37 AND X8<>X THEN H=0:CIRCLE(X8,W5+2),7,4:PAINT(X8,W5+2),4:W5=175
1930 REM  CARGAS  Y  MISILES BARCO*
1940 W=W+3.3:W4=W4+4.2
1950 IF Z>10 THEN W1=W1+3.5
1960 IF Z>35 THEN W2=W2+4
1970 IF Z>50 THEN W3=W3+4.6
1980 IF Z1=5 OR Z1=35 OR Z1=65 OR Z1=100 OR Z1=130 OR Z1=160 OR Z1=190 OR Z1=220
 THEN GOTO 3090
1990 IF Z1>255 THEN Z1=0
2000 IF H5=1 THEN X5=X5+X9:W6=W6+5:PSET(X5,W6),15
```

```
2010 IF W6=175 THEN PSET(X5,W6),4:GOTO 2960
2020 IF W)=192 THEN W=25
2030 IF W1)=192 THEN W1=25
2040 IF W2)=192 THEN W2=25
2050 IF W3)=192 THEN W3=25
2060 IF W)=175 THEN 2910
2070 IF W1)=175 THEN 2930
2080 IF W2)=175 THEN 2940
2090 IF W3)=175 THEN 2950
2100 REM    INSTRUCCIONES-TECLADO
2110 D=STICK(JT)
2120 IF D=1 THEN B=B+2:H4=1:GOSUB 2520
2130 IF D=5 THEN B=B-2:H4=1:GOSUB 2520
2140 IF D=7 THEN X1=X1-2 :GOSUB 2790
2150 IF D=6 THEN X1=X1-2 :GOSUB 2790
2160 IF D=3 THEN X1=X1+2:GOSUB 2790
2170 IF D=4 THEN X1=X1+2:GOSUB 2790
2180 IF D=2 THEN A=A+2:GOSUB 2490
2190 IF D=8 THEN A=A-2:GOSUB 2490
2200 IF H=1 THEN 2230
2210 IF STRIG(JT)=-1 THEN H4=0:GOSUB 2610
2220 REM    SPRITES BARCO Y CARGAS
2230 SPRITE$(4)=V$
2240 PUT SPRITE4,(X-16,25),1,4
2250 SPRITE$(5)=W$
2260 PUT SPRITE5,(X-8,25),1,5
2270 SPRITE$(6)=R$
2280 PUT SPRITE6,(X,25),1,6
2290 SPRITE$(7)=Y$
2300 PUT SPRITE7,(X+8,25),1,7
2310 SPRITE$(8)=Z$
2320 PUT SPRITE8,(X-2,17),1,8
2330 IF X+8)=255 THEN 1820
2340 IF X1)=255 THEN X1=0
2350 SPRITE$(9)=K$
2360 PUT SPRITE9,(X-16,W),1,9
2370 PUT SPRITE11,(X,W1),1,9
2380 PUT SPRITE12,(X,W2),1,9
2390 PUT SPRITE13,(X,W3),1,9
2400 IF H5=1 THEN PSET(X5,W6),4
2410 NEXT
2420 REM
2430 REM      FIN BUCLE PRINCIPAL
2440 REM
2450 REM
2460 REM     IMPRESION DE ANGULO
2470 REM         Y DISTANCIA
2480 REM
2490 LINE (54,0)-(73,6),7,BF
2500 PSET(53,0),7
2510 PRINT#1,A:GOTO 2750
2520 LINE(158,0)-(184,6),7,BF
2530 PSET(154,0),7
2540 IF B<=145 THEN B=145
```

```
2550 IF B>=225 THEN B=225
2560 PRINT#1,B :GOTO 2750
2570 REM
2580 REM      CALCULOS MATEMATICOS
2590 REM           DEL DISPARO
2600 REM
2610 D=INT(SQR(X2^2+21025))
2620 A1=X2/D
2630 RA=.017453347#
2640 A2=A*.017453347#
2650 X3=SQR(B^2-21025)
2660 IF A=0 THEN X4=X1:GOTO 2700
2670 IF A<0 THEN X4=X1-X3:GOTO 2700
2680 IF A>0 THEN X4=X1+X3
2690 IF H4=0 AND B-2<=D AND B+6>=D AND SIN(A2-2*RA)<=A1 AND SIN(A2+2*RA)>=A1 AND
 X1<=X THEN H=1:X8=X1:BEEP: GOTO 2740
2700 IF H4=0 AND B-2<=D AND B+6>=D AND SIN(A2-2*RA)<=-A1 AND SIN(A2+2*RA)>=-A1 A
NDX1>=X THEN H=1:X8=X1:BEEP
2710 REM
2720 REM          PUNTO DE MIRA
2730 REM
2740 CIRCLE (X4,36),1,15:H2=1:H4=0
2750 RETURN
2760 REM
2770 REM    SPRITES DEL SUBMARINO
2780 REM
2790 SPRITE$(1)=S$
2800 PUT SPRITE1,(X1-8,175),15,1
2810 SPRITE$(2)=T$
2820 PUT SPRITE2,(X1,175),15,2
2830 SPRITE$(3)=U$
2840 PUT SPRITE3,(X1+8,175),15,3
2850 IF X1>=239 THEN X1=239
2860 IF X1<=8 THEN X1=8
2870 RETURN
2880 REM
2890 REM      IMPACTO DE LAS CARGAS
2900 REM
2910 IF  X1-8<=X-10 AND X1+16>=X-16 THEN GOTO 2970 ELSE GOTO 2110
2920 IF  X1-8<=X+18 AND X1+16>=X+12 THEN GOTO 2970 ELSE GOTO 2110
2930 IF X1-8<=X+6 AND X1+16>=X THEN GOTO 2970 ELSE GOTO 2110
2940 IF X1-8<=X+6 AND X1+16>=X THEN GOTO 2970 ELSE GOTO 2110
2950 IF X1-8<=X+6 AND X1+16>=X THEN GOTO 2970 ELSE GOTO 2110
2960 IF X5<=X1+16 AND X5=>X1-8 THEN 2970 ELSE H5=0:W6=35:GOTO 2110
2970 C=X1+4:V=175:K=K+1
2980 REM
2990 REM          EXPLOSIONES
3000 REM
3010 PLAY "T170M101V15L1C","M101V15L2E","T190M101V15L1D"
3020 FOR EX=1 TO 16 STEP 2
3030 CIRCLE (C,V),EX,6
3040 CIRCLE (C,V),EX-1,10
3050 NEXT
```

```
3060 IF K=3 THEN GOTO 3170
3070 FOR I=1 TO 800 :NEXT
3080 CLS:A=0:GOTO 1390
3090 X5=X:H5=1:X9=X2/28:BEEP
3100 IF X>X1 THEN X9=-X9
3110 GOTO 2000
3120 X5=X:H5=1:X9=X2/28:BEEP:GOTO 2000
3130 REM
3140 REM          CALIFICACIONES Y
3150 REM          FIN DE PROGRAMA
3160 REM
3170 SCREEN 1
3180 KEY OFF
3190 IF P=25 GOTO 3300
3200 PRINT:PRINT: PRINT"              EL ENEMIGO      "
3210 PRINT:PRINT"     HA DESTRUIDO TU FLOTA      "
3220 PRINT "      HAS LOGRADO HUNDIR       "
3230 PRINT:PRINT"       ";P;"DESTRUCTORES       "
3240 IF P<4 THEN PRINT:PRINT:PRINT"     NUNCA SERAS ALMIRANTE     " ELSE GOTO 3250
3250 IF P>3 AND P<8 THEN PRINT:PRINT:PRINT"LOS SUBMARINOS SON CARISIMOS"ELSE GOT
O 3260
3260 IF P>7 AND P<13 THEN PRINT:PRINT:PRINT"     PRACTICA UN POCO MAS     "ELSE GO
TO 3270
3270 IF P>12 AND P<19 THEN PRINT:PRINT:PRINT"     HAS LUCHADO BIEN     "ELSE GOTO
3280
3280 IF P>18 AND P<25 THEN PRINT:PRINT:PRINT"    BRAVO CASI LO CONSIGUES    "
3290 GOTO 3350
3300 PRINT:PRINT"         ENHORABUENA        "
3310 PRINT:PRINT"        HAS DESTRUIDO        "
3320 PRINT:PRINT"       LA FLOTA ENEMIGA      "
3330 PRINT:PRINT"      TUS BAJAS SON";K;"      "
3340 PRINT:PRINT "      LAS DEL ENEMIGO 25       "
3350 END
```

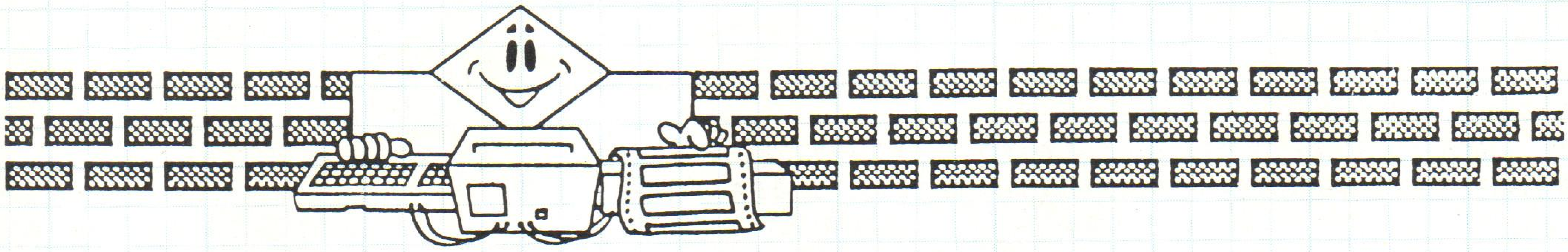




CUADRO

```
2 KEYOFF:WIDTH39:COLOR 15,4,4:CLS
3 LOCATE17,0:PRINT"CUADRO":RESTORE6000:FORI=1TO14:READX$:LOCATE0,I+1:PRINTX$:NEX
T
4 X$=INKEY$:IFX$=""THEN4ELSECLS
10 COLOR 1,7:DIMN(8),C(2,2),U(2,2),S$(11),S(5):GOTO 4000
50 IFS$(I)="/"THENZ=X/YELSEIFS$(I)="x"THENZ=X*YELSEIFS$(I)="+"THENZ=X+YELSEZ=X-Y
52 IF(Z-INT(Z)=0)AND(Z>=0)AND(Z<100)THENRETURN
54 J=RND(-TIME):IFJ<.3THENS$(I)="x"ELSEIF(J>=.3)AND(J<.66)THENS$(I)="+"ELSES$(I)
="-"
56 GOTO 50
70 IFS$(I)="/"THENZ=X/YELSEIFS$(I)="x"THENZ=X*YELSEIFS$(I)="+"THENZ=X+YELSEZ=X-Y
72 IF(Z-INT(Z)=0)AND(Z>=0)AND(Z<100)THENRETURN
74 GOTO 4700
100 FORI=0TO8:N(I)=0:NEXTI
102 FORJ=0TO2:FORI=0TO2:U(I,J)=0
104 X=INT(RND(-TIME)*9+1):IFN(-1+X)=1GOTO 104
106 N(X-1)=1:C(I,J)=X:NEXTI:NEXTJ
110 FORI=0TO11:X=RND(-TIME):IFX<.5THENS$(I)="/"ELSEIF(X>=.5)AND(X<.7)THENS$(I)="
+"ELSEIF(X>=.7)AND(X<.9)THENS$(I)="-"ELSES$(I)="x"
112 NEXTI:RETURN
200 X=C(0,0):Y=C(1,0):I=0:GOSUB50
210 X=Z:Y=C(2,0):I=1:GOSUB50:S(0)=Z
220 X=C(0,1):Y=C(1,1):I=5:GOSUB50
230 X=Z:Y=C(2,1):I=6:GOSUB50:S(1)=Z
240 X=C(0,2):Y=C(1,2):I=10:GOSUB50
250 X=Z:Y=C(2,2):I=11:GOSUB50:S(2)=Z
260 X=C(0,0):Y=C(0,1):I=2:GOSUB50
270 X=Z:Y=C(0,2):I=7:GOSUB50:S(3)=Z
280 X=C(1,0):Y=C(1,1):I=3:GOSUB50
290 X=Z:Y=C(1,2):I=8:GOSUB50:S(4)=Z
300 X=C(2,0):Y=C(2,1):I=4:GOSUB50
310 X=Z:Y=C(2,2):I=9:GOSUB50:S(5)=Z:RETURN
1500 CLS:RESTORE2000:READP$:LOCATE2,2:PRINTP$
1502 RESTORE2002:READP$:FORI=3TO11STEP2:LOCATE2,I:PRINTP$:NEXT
1504 RESTORE2004:READP$:FORI=4TO10STEP2:LOCATE2,I:PRINTP$:NEXT
1506 RESTORE2006:READP$:LOCATE2,12:PRINTP$:BEEP
1508 LOCATE3,1:PRINT"1    2    3":LOCATE1,3:PRINT"1":LOCATE1,7:PRINT"2":LOCATE1,11
:PRINT"3":BEEP
1510 LOCATE5,3:PRINTS$(0):LOCATE9,3:PRINTS$(1):LOCATE3,5:PRINTS$(2):LOCATE7,5:PR
INTS$(3):LOCATE11,5:PRINTS$(4):LOCATE5,7:PRINTS$(5):LOCATE9,7:PRINTS$(6)
```

```
1512 LOCATE3,9:PRINTS$(7):LOCATE7,9:PRINTS$(8):LOCATE11,9:PRINTS$(9):LOCATE5,11:
PRINTS$(10):LOCATE9,11:PRINTS$(11)
1514 LOCATE13,3:PRINTS(0):LOCATE13,7:PRINTS(1):LOCATE13,11:PRINTS(2):LOCATE2,14:
PRINTS(3):LOCATE6,14:PRINTS(4):LOCATE10,14:PRINTS(5)
1516 LOCATE13,3:PRINT"=":LOCATE13,7:PRINT"=":LOCATE13,11:PRINT"=":LOCATE3,13:PRI
NT"=   =   ="
1518 FORI=5TO9STEP4:FORJ=5TO9STEP4:LOCATEI,J:PRINT"L":NEXTJ:NEXTI:BEEP:RETURN
2000 DATA" X W R W R W R W R W Y"
2002 DATA" V   V   V   V   V   V"
2004 DATA" T W U W U W U W U W S"
2006 DATA " Z W Q W Q W Q W Q W ["
3000 GOSUB4100:FORI=0TO2:FORJ=0TO2:LOCATEI+3+3*I,J+3+3*J:PRINTMID$(STR$(C(I,J)),
2):NEXTJ:NEXTI:GOTO 5000
4000 CLS:GOSUB100:GOSUB200:FORI=0TO2:FORJ=0TO2:U(I,J)=C(I,J)+10:NEXTJ:NEXTI:GOSU
B1500
4010 GOSUB4100:BEEP
4011 LOCATE1,20:PRINT"FILA: ":J$=INKEY$:IFJ$=""THEN4011ELSEIFJ$="1"ORJ$="2"ORJ$=
"3"THEN4015ELSEIFJ$="F"ORJ$="f"THEN4500ELSE4011
4015 LOCATE7,20:PRINTJ$;"     COLUMNA: ":Y=VAL(J$):BEEP
4020 J$=INKEY$:IFJ$=""THEN4020ELSEIFJ$="1"ORJ$="2"ORJ$="3"THEN4025ELSE4020
4025 LOCATE20,20:PRINTJ$:X=VAL(J$):LOCATEX-1+3*X,Y-1+3*Y:PRINT"[":BEEP:LOCATE25,
20:PRINT"NUMERO: "
4030 J$=INKEY$:IFJ$=""THEN4030ELSEIFJ$>"0"ANDJ$<="9"THEN4035ELSE4030
4035 LOCATE33,20:PRINTJ$:LOCATEX-1+3*X,Y-1+3*Y:PRINTJ$:U(X-1,Y-1)=VAL(J$):BEEP:G
OSUB4100:GOTO 4010
4040 FORI=0TO39:LOCATEI,20:PRINT" ":NEXT:GOTO 4010
4100 FORI=0TO39:LOCATEI,20:PRINT" ":NEXT:RETURN
4500 GOSUB4100
4510 X=U(0,0):Y=U(1,0):I=0:GOSUB70
4520 X=Z:Y=U(2,0):I=1:GOSUB70:IFS(0)<>ZGOTO 4700
4530 X=U(0,1):Y=U(1,1):I=5:GOSUB70
4540 X=Z:Y=U(2,1):I=6:GOSUB70:IFS(1)<>ZGOTO 4700
4550 X=U(0,2):Y=U(1,2):I=10:GOSUB70
4560 X=Z:Y=U(2,2):I=11:GOSUB70:IFS(2)<>ZGOTO 4700
4570 X=U(0,0):Y=U(0,1):I=2:GOSUB70
4580 X=Z:Y=U(0,2):I=7:GOSUB70:IFS(3)<>ZGOTO 4700
4590 X=U(1,0):Y=U(1,1):I=3:GOSUB70
4600 X=7:Y=U(1,2):I=8:GOSUB70:IFS(4)<>ZGOTO 4700
4610 X=U(2,0):Y=U(2,1):I=4:GOSUB70
4620 X=Z:Y=U(2,2):I=9:GOSUB70:IFS(5)<>ZGOTO 4700
4650 GOSUB4100:LOCATE17,20:PRINT"BIEN"::PLAY"dgad":FORI=0TO1600:NEXT:GOTO 5000
4700 GOSUB4100:LOCATE18,20:PRINT"MAL":PLAY"dcc":FORI=0TO1200:NEXT:GOTO 4800
4800 GOSUB4100:LOCATE1,20:PRINT"C:CONTINUAR  R:RESOLVER  F:FINALIZAR":BEEP
4810 X$=INKEY$:IFX$=""GOTO 4810ELSEIFX$="C"ORX$="c"THENGOTO 4010ELSEIFX$="R"ORX$
="r"THENGOTO 3000ELSEIFX$="F"ORX$="f"THENGOTO 5500ELSEGOTO 4810
5000 GOSUB4100:LOCATE7,20:PRINT"O:OTRO       F:FINALIZAR":BEEP
5010 X$=INKEY$:IFX$=""THENGOTO 5010ELSEIFX$="O"ORX$="o"THENGOTO 4000ELSEIFX$="F"
ORX$="f"THENGOTO 5500ELSEGOTO 5010
5500 CLS:COLOR 15,4,4:LOCATE7,10:PRINT"PARA EL PROXIMO PROGRAMA":LOCATE14,12:PRI
NT"PULSA PLAY":CLOAD
6000 DATA"  En CUADRO has de poner los n#meros","del 1 al 9 en los cuadros en bl
anco,","de tal manera que al operarlos seg#n","los signos te den las soluciones
que","hay tras los signos =.",""
6002 DATA" Cuando creas tener la soluci"n o de-","sees parar pulsa (F).","","","
","","","      PULSA TECLA PARA COMENZAR"
```

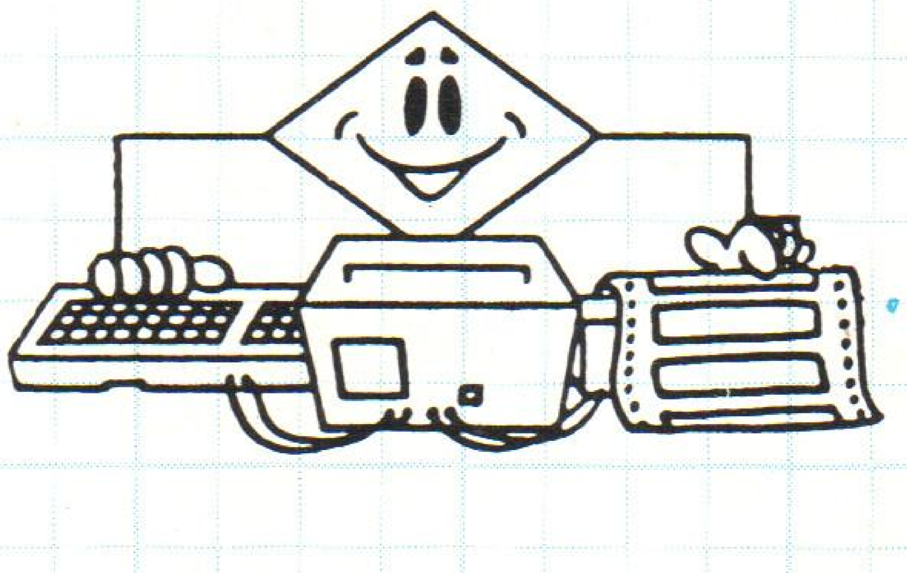


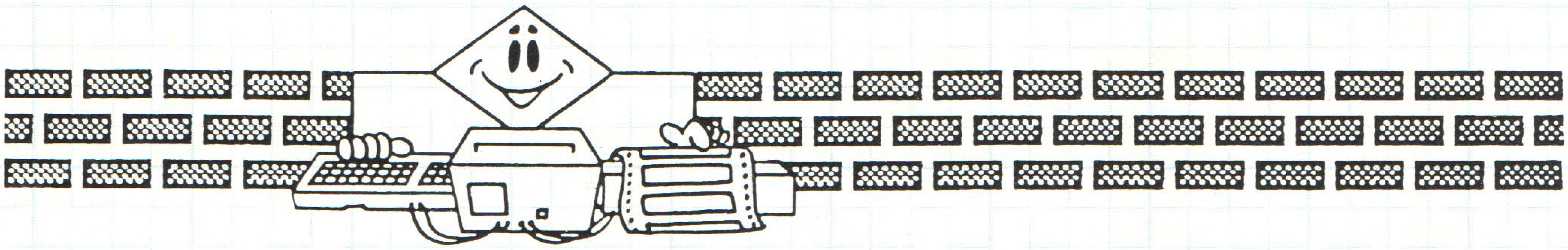
BARQUITOS

```
5 ON ERROR GOTO 10100
9 HU=0:HS=0:DIMF(9,9),T(9,9):COLOR ,15,4:SCREEN2,0:LINE(0,150)-(256,192),4,BF
10 FORJ=0TO6:B$="":FORI=1TO8:READX$:B$=B$+CHR$(VAL("&b"+X$)):NEXTI:SPRITE$(J)=B$
:NEXTJ
12 FORI=232TO100STEP-1:PUTSPRITE4,(I+16,142),4,4:PUT SPRITE0,(I+8,142),4,0:PUT S
PRITE5,(I,142),4,5:PUT SPRITE3,(I+16,134),4,3:PUT SPRITE2,(I+8,134),4,2:NEXTI
14 SOUND 1,0:SOUND 8,6:FORJ=0TO142:SOUND 0,J+100:PUT SPRITE1,(109,J),1,1:NEXTJ:S
OUND 0,200:SOUND 1,15:SOUND 8,10:FORT=1TO100:NEXT:SOUND 8,0
16 FORJ=1TO25:FORI=6TO4STEP-2:PUTSPRITE5,(100,142),I,5:PUT SPRITE0,(108,142),I,0
:PUT SPRITE4,(116,142),I,4:PUT SPRITE2,(108,134),I,2:PUT SPRITE3,(116,134),I,3:N
EXTI:NEXTJ
18 PUT SPRITE6,(100,134),4,6:FORI=150TO138STEP-1:LINE(0,I)-(256,I),4:FORJ=0TO100
:NEXTJ,I:COLOR 15,4,4:WIDTH 39:GOTO 100
90 LINE(0,168)-(256,192),5,BF:RETURN
91 LINE(0,150)-(256,192),12,BF:RETURN
100 SCREEN2:OPEN"grp:"AS#1:GOSUB20000:DRAW"bm8,30":PRINT#1,"NUMERO DE BARCOS DE
LONGITUD 1":DRAW"BM8,40":PRINT#1,"(DE 3 A 6):":BEEP
102 X$=INKEY$:IFX$=""THEN102ELSEIFX$<"3"ORX$>"6"THEN102ELSEDRAW"BM98,40":PRINT#1
,X$:N1=VAL(X$)
104 DRAW"bm8,60":PRINT#1,"NUMERO DE BARCOS DE LONGITUD 2":DRAW"BM8,70":PRINT#1,"
(DE 2 A 4):":BEEP
106 X$=INKEY$:IFX$=""THEN106ELSEIFX$<"2"ORX$>"4"THEN106ELSEDRAW"BM98,70":PRINT#1
,X$:N2=VAL(X$):FORI=0TO500:NEXTI
110 SCREEN2:RESTORE10003:READX$:DRAW"BM20,20":PRINT#1,X$:FORI=28TO92STEP8:RESTOR
E10004:READX$:DRAW"BM20,=I;":PRINT#1,X$:NEXTI:RESTORE10005:READX$:DRAW"BM20,100"
:PRINT#1,X$
112 DRAW"BM24,16":PRINT#1,"0123456789       0123456789":FORI=24TO96STEP8:DRAW"BM8
,=I;":PRINT#1,I/8-3:DRAW"BM136,=I;":PRINT#1,I/8-3:NEXTI:DRAW"BM10,112":PRINT#1,"
[[";N2:DRAW"BM10,122":PRINT#1,"[";N1
114 DRAW"BM48,152":PRINT#1,"INTRODUCE TUS BARCOS":FORI=1TON1+2*N2:GOSUB90:DRAW"B
M10,170":PRINT#1,"FILA:":BEEP
116 X$=INKEY$:IFX$=""THEN116ELSEIFX$<"0"ORX$>"9"THEN116ELSEX=VAL(X$)*8+24:DRAW"B
M52,170":PRINT#1,X$
118 DRAW"BM10,180":PRINT#1,"COLUMNA:":BEEP
120 X$=INKEY$:IFX$=""THEN120ELSEIFX$<"0"ORX$>"9"THEN120ELSEY=VAL(X$)*8+24:DRAW"B
M79,180":PRINT#1,X$:DRAW"BM=y;,=x;":PRINT#1,"["
122 NEXTI:GOSUB90:DRAW"BM10,175":PRINT#1,"CONFORME    S/N"
124 X$=INKEY$:IFX$=""THEN124ELSEIFX$="S"ORX$="s"THEN200ELSEIFX$="N"ORX$="n"THEN1
10ELSE124
```

```
200 GOSUB91:DRAW"BM16,171":PRINT#1,"ESTOY PONIENDO MIS BARCOS"
202 I=1
203 N=1:Y=INT(RND(-TIME)*10):X=INT(RND(-TIME)*10):GOSUB220:XX=X:YY=Y
204 M=INT(RND(-TIME)*4+1):ONMGOTO 205,206,207,208
205 Y=YY:X=XX-1:IFX<0THEN204ELSEGOSUB220:GOTO 210
206 Y=YY:X=XX+1:IFX>9THEN204ELSEGOSUB220:GOTO 210
207 X=XX:Y=YY+1:IFY>9THEN204ELSEGOSUB220:GOTO 210
208 X=XX:Y=YY-1:IFY<0THEN204ELSEGOSUB220:GOTO 210
210 F(XX,YY)=2:F(X,Y)=2
211 I=I+1:IFI=N2+1THEN212ELSE203
212 I=1
213 N=2:Y=INT(RND(-TIME)*10):X=INT(RND(-TIME)*10):GOSUB220:F(X,Y)=1
214 I=I+1:IFI=N1+1THEN400ELSE213
215 ONERRORGOTO10200:GOTO 400
220 FORJ=X-1TOX+1:FORK=Y-1TOY+1:IFJ<0ORJ>9ORK<0ORK>9THEN222
221 IFF(J,K)<>0THEN223
222 NEXTK,J:RETURN
223 ONNGOTO 203,213
300 FORI=X-1TOX+1:FORJ=Y-1TOY+1:IFI<0ORI>9ORJ<0ORJ>9THEN310
305 IFF(I,J)=2THENF(I,J)=1
310 NEXTJ,I:RETURN
350 FORI=X-1TOX+1:FORJ=Y-1TOY+1:IFI<0ORI>9ORJ<0ORJ>9THEN360
355 T(I,J)=1
360 NEXTJ,I:RETURN
400 COLOR 15:IFHS=2*N2+N1THEN8500ELSEGOSUB91:DRAW"BM100,152":PRINT#1,"TU TURNO":
DRAW"BM10,162":PRINT#1,"FILA:":BEEP
401 X$=INKEY$:IFX$<"0"ORX$>"9"THEN401ELSEX=VAL(X$):DRAW"BM51,162":PRINT#1,X$;"
     COLUMNA:":BEEP
402 X$=INKEY$:IFX$<"0"ORX$>"9"THEN402ELSEY=VAL(X$):DRAW"BM186,162":PRINT#1,X$
404 IFF(X,Y)=0THENDRAW"BM112,180":PRINT#1,"AGUA":X=X*8+24:Y=Y*8+154:DRAW"BM=Y;,=
X;":PRINT#1,"w":BEEP:GOTO 500
405 IFF(X,Y)=1THENDRAW"BM104,180":PRINT#1,"HUNDIDO":BEEP:F(X,Y)=0:X=X*8+24:Y=Y*8
+152:DRAW"BM=Y;,=X;":PRINT#1,"[":BEEP:HU=HU+1:GOTO 500
406 IFF(X,Y)=2THENDRAW"BM104,180":PRINT#1,"TOCADO":BEEP:GOSUB300:F(X,Y)=0:X=X*8+
24:Y=Y*8+152:DRAW"BM=Y;,=X;":PRINT#1,"[":BEEP:HU=HU+1:GOTO 500
500 FORI=0TO900:NEXTI:IFHU=2*N2+N1THEN8000
1000 GOSUB91:DRAW"BM100,152":PRINT#1,"MI TURNO":IFT=1THEN1100
1010 X=INT(RND(-TIME)*10):Y=INT(RND(1)*10):IFT(X,Y)<>0THEN1010ELSEGOTO1200
1100 Y=YY:X=XX-1:IFX<0THEN1102ELSEIFT(X,Y)<>0THEN1102ELSE1200
1102 Y=YY:X=XX+1:IFX>9THEN1103ELSEIFT(X,Y)<>0THEN1103ELSE1200
1103 Y=YY-1:X=XX:IFY<0THEN1104ELSEIFT(X,Y)<>0THEN1104ELSE1200
1104 Y=YY+1:X=XX:IFY>9THEN1100ELSEIFT(X,Y)<>0THEN1100ELSE1200
1200 DRAW"BM11,162":PRINT#1,"FILA:";X;"          COLUMNA:";Y:DRAW"BM12,180":PRINT#
1,"1:AGUA   2:TOCADO   3:HUNDIDO":BEEP:BEEP
1210 X$=INKEY$:IFX$<"1"ORX$>"3"THEN1210
1211 M=Y*8+24:N=X*8+24:COLOR 6
1212 ONVAL(X$)GOTO 1220,1230,1240
1220 COLOR 15:T(X,Y)=1:M=M+1:DRAW"BM=M;,=N;":PRINT#1,"w":GOTO 400
1230 T(X,Y)=1:HS=HS+1:DRAW"BM=M;,=N;":PRINT#1,"[":T=1:XX=X:YY=Y:GOTO 400
1240 HS=HS+1:DRAW"BM=M;,=N;":PRINT#1,"[":GOSUB350:IFT=1THENX=XX:Y=YY:GOSUB350
1250 T=0:GOTO 400
8000 GOSUB91:DRAW"BM62,154":PRINT#1,"FELICIDADES GANASTE":GOTO 8520
8500 COLOR 8:FORI=0TO9:FORJ=0TO9:IFF(I,J)<>0THENX=I*8+24:Y=J*8+152:DRAW"BM=Y;,=X
;":PRINT#1,"["
```

```
8505 NEXTJ,I
8510 COLOR 15,4:GOSUB91:DRAW"BM96,154":PRINT#1,"PERDISTE"
8520 GOSUB90:DRAW"BM10,171":PRINT#1,"1:OTRA":DRAW"BM10,181":PRINT#1,"2:FINALIZAR
"
8530 X$=INKEY$:IFX$="1"THENRUNELSEIFX$="2"THEN8600ELSE8530
8600 SCREEN0:LOCATE11,10:PRINT"PULSA PLAY":LOCATE14,11:PRINT"PARA":LOCATE8,12:PR
INT"PROXIMO PROGRAMA":CLOAD
10000 DATA111111,111111,11111111,11111111,11111111,11111111,1111111,1111111,0,
1000010,1000010,1111110,111100,111100,111100,11000,0,0,0,11100,11100,11100,11111
1,101010
10001 DATA0,0,0,1110000,1110000,1110000,11111000,10101000,11111000,11111000,1111
1111,11111111,11111110,11111100,11111100,11111100
10002 DATA11111111,1111111,111111,11111,1111,111,11,1,0,0,0,11100,101100,11110,1
110,1110
10003 DATA" X R R R R R R R R Y      X R R R R R R R R Y"
10004 DATA" T U U U U U U U U S      T U U U U U U U U S"
10005 DATA" Z Q Q Q Q Q Q Q Q [      Z Q Q Q Q Q Q Q Q ["
10100 ERASEF:DIMF(9,9):RESUME200
10200 RESUME1000
20000 DRAW"BM100,20":PRINT#1,"BARCOS":RESTORE 20100:FORI=1TO8:READX$:J=I*10+50:D
RAW"BM12,=J;":PRINT#1,X$:NEXTI:DRAW"BM24,180":PRINT#1,"PULSA TECLA PARA COMENZAR
"
20001 X$=INKEY$:IFX$=""THEN20001ELSESCREEN2:RETURN
20100 DATA"Este es el conocido juego de","los barquitos.","Has de poner de 3 a 6
 barcos","de longitud  1 (a elegir), y"
20101 DATA"de  2 a 4 barcos de longitud","2 (tambien a elegir).","No vale poner
 barcos que se","toquen."
```



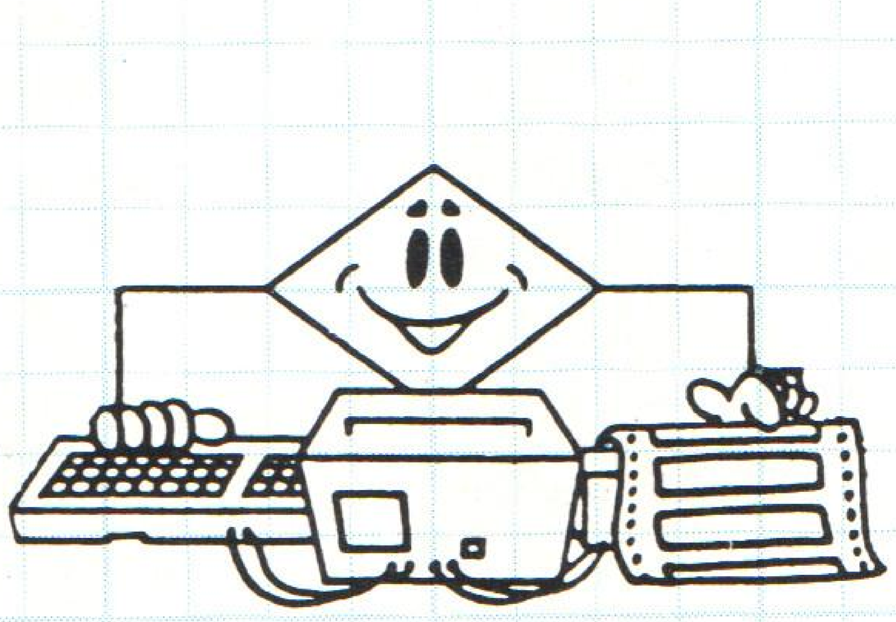


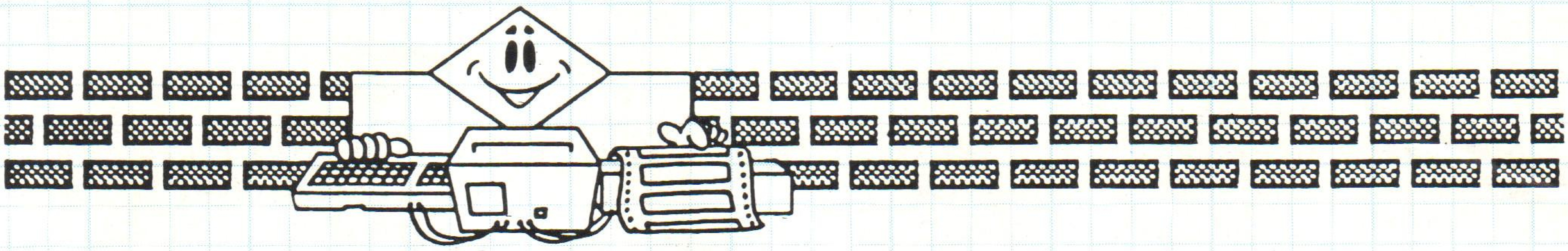
MASTER-MIND

```
10 ' PROGRAMA <MASTER-MIND>
20 ' CREADO POR M.J.C. Y F.A.P.
30 KEYOFF
40 COLOR15,4,4:SCREENO
45 WIDTH 39
50 LOCATE13,2:PRINT"MASTER-MIND"
60 LOCATE2,5:PRINT"El iuego consiste en averiguar un":PRINT:PRINT"c"digo de colo
res. Como pistas te":PRINT:PRINT"indicarO con una ficha negra cuando"
70 PRINT:PRINT"aciertes el color y adem s la posici"n":PRINT:PRINT"y con una fic
ha blanca cuando aciertes":PRINT:PRINT"el color pero no la posici"n."
80 LOCATE4,20:PRINT"PULSA UNA TECLA PARA CONTINUAR"
90 IFINKEY$=""THEN90
100 CLS
110 DEFINTA-Z
120 LOCATEO,8:PRINT"Elige el n#mero de fichas que formar n el c"digo (3, 4 " 5 f
ichas)":NF=VAL(INPUT$(1))
130 IFNF<3ORND>5THEN120
140 LOCATEO,12:PRINT"(Permites que los colores se repitan en el c"digo? (S/N)":R
C$=INPUT$(1)
150 IFRC$<>"s"ANDRC$<>"S"ANDRC$<>"n"ANDRC$<>"N"THEN140
160 IFRC$="s"ORRC$="S"THENRC$="con"ELSERC$="sin"
170 SCREEN2
175 DRAW"a0s4"
180 OPEN"grp:"AS#1
190 LINE(0,0)-(255,181),1,B
200 LINE(0,0)-(255,10),1,B
210 LINE(220,10)-(255,181),1,BF
220 LINE(0,10)-(10,181),1,BF
230 DRAW"bm114,10c1d170r1u170"
240 DRAW"bm62,10d170bm167,10d170"
250 DRAW"bm20,2":PRINT#1,NF;"fichas":DRAW"bm100,2":PRINT#1,RC$;" repetaBi"1"
260 FOR Z=30TO162STEP12
270 J=J+1
280 DRAW"BM2,=Z;":PRINT#1,MID$("MASTER!MIND",J,1)
290 MEXT
300 FORZ=1TONF
310 C(Z)=RND(1)*8+1
320 IFRC$="con"ORZ=1THEN360
330 FORX=1TOZ-1
```

```
340 IFC(Z)=C(X)THEN310
350 NEXT
360 NEXT
370 FORX=1TO8
380 GOSUB1010
390 H=X*20+12
400 CIRCLE(230,H),3,C
410 PAINT(230,H),C
420 H=H-3:DRAW"bm232,=h;":PRINT#1,X
430 NEXT
440 J=1
450 DRAW"BM20,183":PRINT#1,"INTRODUCE LA JUGADA N.";J
460 FORZ=1TONF
470 N(Z)=VAL(INPUT$(1)):IFN(Z)<1ORN(Z)>8THEN470
480 X=N(Z):GOSUB1010
490 IFJ<17THENXC=12+Z*8:YC=15+J*10ELSEXC=116+Z*8:YC=15+(J-16)*10
500 CIRCLE(XC,YC),3,C:PAINT(XC,YC),C
510 NEXT
520 LINE(20,183)-(255,191),4,BF
528 DRAW"BM50,183":PRINT#1,"EVALUANDO TU JUGADA"
540 FORT=1TO500:NEXT
550 NG=0:BL=0
560 FORZ=1TONF
570 IFC(Z)=N(Z)THENNG(Z)=1ELSENG(Z)=0
580 NEXT
590 FORZ=1TONF:NG=NG+NG(Z):NEXT
600 FORZ=1TONF
610 IFNG(Z)=1THEN660
620 FORZZ=1TONF
116 IFZZ=ZTHEN650
640 IFC(Z)=N(ZZ)THENBL=BL+1
650 NEXT
660 NEXT
670 LINE(20,183)-(255,191),4,BF:BEEP
680 IFNG=0THEN 730
690 FORZ=1TONG
700 IFJ<17THENXA=67+X*8ELSEXA=170+Z*8
710 CIRCLE(XA,YC),2,1:PAINT(XA,YC),1
720 NEXT
730 IFBL=0THEN780
740 FORZ=NG+1TONG+L
750 IFJ<17THENXA=67+Z*8ELSEXA=170+Z*8
760 CIRCLE(XA,YC),2,15:PAINT(XA,YC),15
770 NEXT
780 IFNG=NFTHENGOTO820
790 IFJ=32THENGOTO860
800 J=J+1:GOTO450
810 IFINKEY$=""THEN810
820 DRAW"BM20,183":PRINT#1,"ACERTASTE MI CODIGO"
830 PLAY"T255L204BO5L4CDDCO4BAGGABL2BL4AAL2BO5L4CDDCO4BAGGABL2AL4GG"
840 IFPLAY(1)=-1THEN840
850 GOTO950
860 DRAW"BM40,183":PRINT#1,"SOBREPASASTE LAS JUGADAS"
870 FORT=1TO2000:NEXT
```

```
880 LINE(10,183)-(255,191),4,BF
890 DRAW"BM20,183":PRINT#1,"EL CODIGO ERA:"
900 FORZ=1TONF:X=C(Z):GOSUB1010:CIRCLE(148+Z*8,186),3,C:PAINT(148+Z*8,186),C:NEX
T
910 PLAY"O2L8BL7AL6GL5FL4EL3DL2CO1L1C"
920 IFPLAY(1)=-1THEN840
930 FORT=1TO3000:NEXT
940 GOTO950
950 LINE(10,182)-(255,191),4,BF
960 DRAW"BM50,183"8END#1,"OTRA PARTIDA (S/N)?"
970 R$=INPUT$(1)
980 IFR$="S"ORR$="s"THENSCREEN0:RUN110
990 IFR$="N"ORR$="n"THENSCREEN0
995 LOCATE4,10:PRINT"PARA EL CAGUI■NTE PROGRAMA":LOCATE4,128PRINT"PULSA PLAY EN
EL CASSETTE"8CLOAD
1000 GOTO970
1010 RESTORE
1020 FORW=1TOX
1030 READC
1040 NEXT
1050 RETURN
1060 DATA6,9,10,3,12,7,5,13
```

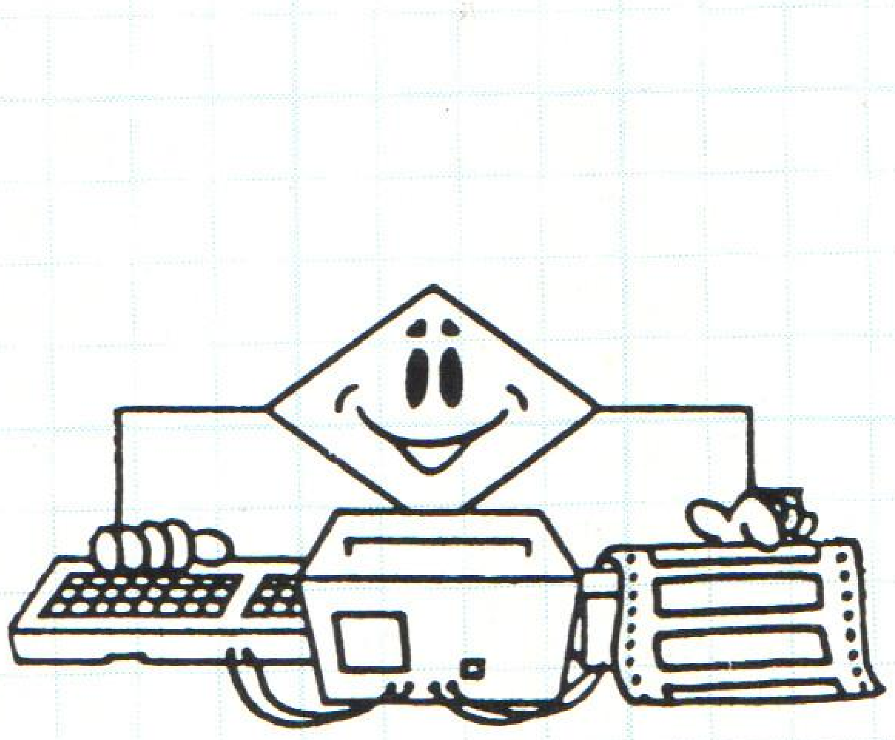


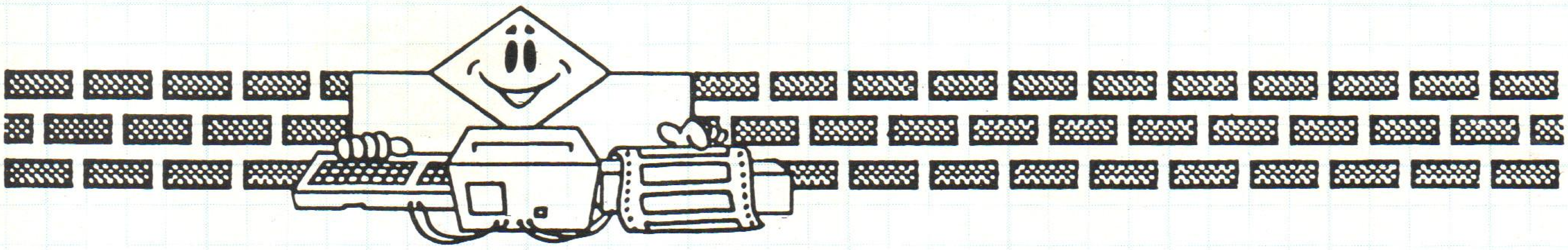


SISTEMAS

```
1 REM Copyright 1985 by J.L.T. XV.
5 SCREEN3
10 OPEN"GRP:"AS#1
11 DRAW"BM8,10":PRINT#1,"SISTEMAS":DRAW"BM8,50":PRINT#1,"LINEALES":DRAW"BM107,10
0":PRINT#1,"BY":DRAW"BM8,150":PRINT#1,"JLT. XV."
20 FORJ=0TO3000:NEXTJ:COLOR15,4,4:SCREEN 0:WIDTH39:LOCATE0,0:PRINT"SISTEMAS DE E
CUACIONES LINEALES POR EL METODO DE SUSTITUCION."
21 LOCATE0,4:PRINT" Este programa  resuelve,  paso a paso,";"sistemas de ecuacio
nes lineales, de dosecuaciones  con dos inc"gnitas por el"
22 LOCATE0,7:PRINT"motodo de sustituci"n.",,," Introduce  los valores, y  pulsa
tecla";"cuando te lo pida."
50 GOSUB10000:CLS
100 LOCATE0,0:PRINT"AX+BY=C",,"DX+EY=F",," W W W W W W W",,,,"INTRODUCE LOS VALO
RES."
102 INPUT"A=";X1:INPUT"B=";X2:INPUT"C=";X3:INPUT"D=";X4:INPUT"E=";X5:INPUT"F=";X
6
110 GOSUB10000:CLS
120 Z=X2:GOSUB2000:A$=STR$(X1)+"X"+S$+"Y":Z=X5:GOSUB2000:B$=STR$(X4)+"X"+S$+"Y":
IFLEN(A$)>LEN(B$)THENM=LEN(A$)ELSEM=LEN(B$)
122 LOCATEM-LEN(A$),0:PRINTA$;"=";X3:LOCATEM-LEN(B$),1:PRINTB$;"=";X6
124 IFLEN(STR$(X3))>LEN(STR$(X6))THENN=LEN(STR$(XE))ELSEN=LEN(STR$(X6))
126 FORI=0TOM+N:LOCATEI,2:PRINT" W":NEXTI
200 LOCATE0,18:PRINT"DESPEJAMOS LA X DE LA PRIMERA ECUACION":GOSUB1000:LOCATE0,4
:PRINT"(*)  ";E$:GOSUB10000
210 LOCATE0,18:PRINT" SUSTITUIMOS LA X EN LA 2& ECUACION":GOSUB1010:LOCATE0,5:PR
INTE$:GOSUB10000
220 LOCATE0,18:PRINT"       QUITAMOS EL PARENTESIS":GOSUB1020:LOCATE0,6:PRINTE$:
GOSUB10000
230 LOCATE0,18:PRINT"        QUITAMOS EL COCIENTE":GOSUB1030:LOCATE0,7:PRINTE$:G
OSUB10000
240 LOCATE0,18:PRINT"      REAGRUPAMOS LOS TERMINOS":GOSUB1040:LOCATE0,8:PRINTE$
:GOSUB10000
250 LOCATE0,18:PRINT"        SACAMOS FACTOR COMUN":GOSUB1050:LOCATE0,9:PRINTE$:G
OSUB10000
260 LOCATE0,18:PRINT"           DESPEJAMOS LA Y":GOSUB1060:LOCATE0,10:PRINTE$:GO
SUB10000
```

```
270 Y=(X1*X6-X4*X3)/(X1*X5-X2*X4):LOCATE0,18:PRINT"                        DIVIDIMOS":LOCA
TE0,11:PRINT"Y=";Y:GOSUB10000
280 Z=-X2:GOSUB2000:E$="X=["+STR$(X3)+S$+"("+STR$(Y)+")]/"+STR$(X1):LOCATE0,18:P
RINT"       SUSTITUIMOS LA Y EN (*)":LOCATE0,12:PRINTE$:GOSUB10000
290 X=(X3-X2*Y)/X1:LOCATE0,18:PRINT"                   OPERAMOS":LOCATE0,13:PRINT"X="
;X:GOSUB10000:GOSUB10100
1000 Z=-X2:GOSUB2000:E$="X=["+STR$(X3)+S$+"Y]/"+STR$(X1):RETURN
1010 A$=E$:Z=X5:GOSUB2000:E$=STR$(X4)+MID$(A$,3)+S$+"Y="+STR$(X6):RETURN
1020 Z=-X2*X4:GOSUB2000:R$=S$:Z=X5:GOSUB2000:E$="["+STR$(X3*X4)+R$+"Y]/"+STR$(X1
)+S$+"Y="+STR$(X6):RETURN
1030 Z=X1*X5:GOSUB2000:E$=STR$(X4*X3)+R$+"Y"+S$+"Y="+STR$(X1*X6):RETURN
1040 P$=S$:Z=-X3*X4:GOSUB2000:E$=R$+"Y"+P$+"Y="+STR$(X1*X6)+S$:RETURN
1050 E$="["+R$+P$+"]Y="+STR$(X1*X6)+S$:RETURN
1060 E$="Y="+STR$(X1*X6-X4*X3)+"/"+STR$(-X4*X2+X1*X5):RETURN
2000 IFZ<0THENS$=STR$(Z)ELSES$="+"+MID$(STR$(Z),2)
2010 RETURN
10000 LOCATE0,19:PRINT"      PULSA TECLA PARA CONTINUAR"
10002 T$=INKEY$:IFT$=""GOTO10002
10004 FORI=0TO39:FORJ=17TO19:LOCATEI,J:PRINT" ":NEXTJ:NEXTI:RETURN
10100 GOSUB10004:LOCATE0,18:PRINT"PULSA O PARA HACER OTRO SISTEMA.","PULSA F PAR
A FINALIZAR."
10102 T$=INKEY$:IFT$=""THENGOTO10102ELSEIFT$="O"ORT$="o"THENGOTO10110ELSEIFT$="F
"ORT$="f"THENGOTO10120
10110 CLS:GOTO 100
10120 CLS:LOCATE4,10:PRINT"PARA EL SIGUIENTE PROGRAMA"
10130 LOCATE4,12:PRINT"PULSA PLAY EN EL CASSETTE"
10140 CLOAD
10150 END
```



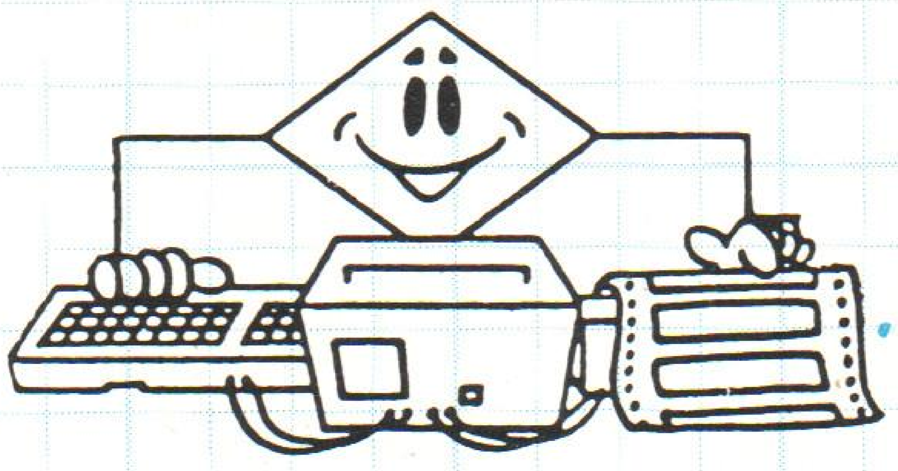


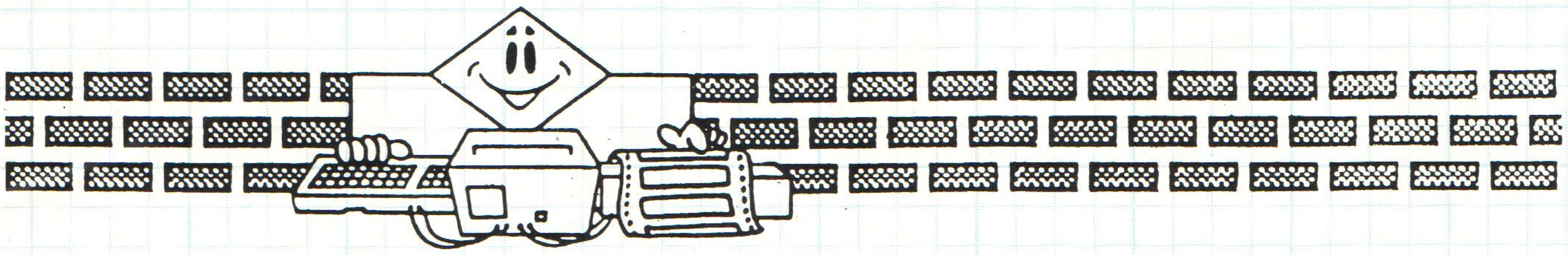
LUNA

```
20 'CREAD32P82 M.H.C. Y F.A.P.
30 COLOR15,1,1:KEYOFF:SCREENO
35 WIDTH 39
40 LOCATE 12,3:PRINT"ALUNIZAJE"
50 LOCATE 2,5:PRINT"Eres el intropido piloto de una nave espacial que debe aluni
zar en su base, para hacer esta maniobra dispones de   poco carburante. El contr
ol de la nave se consigue con el cursor."
60 LOCATE 1,11:PRINT"Juegas con teclado (0) o ioystick (1)":R$=INPUT$(1)
70 IF R$<>"0"ANDR$<>"1"THEN60ELSEDS=VAL(R$)
80 LOCATE1,13:PRINT"Elige nivel de iuego:":LOCATE 8,15:PRINT"Sin gravedad (1)":L
OCATE8,17:PRINT"Gravedad moderada (2)":LOCATE8,19:PRINT"Supergravedad (3)":NJ=VA
L(INPUT$(1))
90 IFNJ<1ORNJ>3THEN80ELSEIFNJ=1THENNJ=0ELSEIFNJ=2THENNJ=+5E-04ELSEIFNJ=3THENNJ=+
4E-03
100 DEFDBLF
110 SCREEN2,2
120 OPEN"GRP:"AS#1
130 GOSUB640
140 DIMA%(128)
150 LINE(0,0)-(255,191),4,B
160 LINE(0,0)-(255,10),4,BF
170 SOUND0,250:SOUND1,15
180 PS=INT(RND(-TIME)*100)+120
190 IFPS/2<>INT(PS/2)THENPS=PS+1
200 Y=100
210 T=INT(RND(1)*9+1.5)
220 PSET(0,100)
230 FORX=0TO256STEP2
240 TIME=INT(RND(1)*65535!+.5)
250 K=INT(RND(-TIME)*9+1.5)
260 IFX=PSTHENX=X+20:LINE-(X,Y),4:PX=PS+2:PY=Y-16:GOTO 340
270 IFY<180ANDY>90ANDK<TTHENS=S+1:Y=Y-K:GOTO310
280 IFY<180ANDY>90ANDK>TTHENR=R+1:Y=Y+K:GOTO310
290 IFY<=90THENY=Y+K
300 IFY>=180THENY=Y-K
310 LINE-(X,Y),4
320 A%(X/2)=Y
330 IFS>10THENS=0:T=3ELSEIFR>10THENR=0:T=7
340 NEXT
```

```
350 PAINT(2,189),4
360 FORX=PS TO PS+20 STEP+2
370 A%(X/2)=PY+16
380 NEXT
390 FORX=0TO256STEP2
400 PL=INT(RND(1)*(A%(X/2)-22))+10
410 CS=INT(RND(1)*14+1.5)
420 IFCS=4THEN410
430 PSET(X,PL),CS
440 NEXT
450 PUTSPRITE0,(PX,PY),6,0
460 CR=0:GOSUB560:GOSUB590
470 FI=.1:FG=.1:FX=0:FY=10
480 PUTSPRITE1,(FX,FY),7,1
490 IFPOINT(FX+3,FY+16)=4ORPOINT(FX+13,FY+16)=4THEN860
500 D=STICK(DS)
510 ONDGOSUB760,770,780,790,800,810,820,830
520 FX=FX+FI:FY=FY+FG*ABS(FY+FG>8)
530 FG=FG+NJ
540 GOTO480
550 IFINKEY$=""THEN550
560 LINE(66,0)-(98,10),4,BF
570 DRAW"BM10,2":PRINT#1,USING"PUNTOS:####";PT
580 RETURN
590 DRAW"BM120,2":PRINT#1,"CARBURANTE:"
600 FORH=210TO240
610 LINE(H,2)-(H,8),10
620 NEXT
630 RETURN
640 FORSP=0TO1:T$="":FORZ=1TO32
650 READE:T$=T$+CHR$(E):NEXT
660 SPRITE$(SP)=T$:NEXT
670 RETURN
680 DATA,,,,,,,,,,,,,,,255,255,,,,,,,,,,,,,,,255,255,,,,2,2,7,12,28,12,7,15,5,5,
8,24,,,,,,,,224,48,56,48,224,240,160,160,16,24
690 DATA
700 CR=CR+.1
710 SOUND8,9
720 LINE(241-CR,0)-(241-CR,10),4
730 IFCR>29THENLINE(20,100)-(235,110),1,BF:DRAW"BM25,102":PRINT#1,"TE QUEDASTE S
IN CARBURANTE":FORT=1TO3000:NEXT:SOUND8,0:RETURN980
740 SOUND8,0:SOUND9,0:SOUND10,0
750 RETURN
760 FG=FG-.01:GOSUB700:RETURN
770 GOSUB760:GOSUB780:RETURN
780 FI=FI+.01:GOSUB700:RETURN
790 GOSUB780:GOSUB800:RETURN
800 FG=FG+.01:GOSUB700:RETURN
810 GOSUB800:GOSUB820:RETURN
820 FI=FI-.01:GOSUB700:RETURN
830 GOSUB760:GOSUB820:RETURN
860 IFFX>PSANDFX<PS+20THENLINE(20,100)-(235,110),1,BFELSE920
870 DRAW"BM50,102":PRINT#1,"---ALUNIZASTE!!!"
880 PT=PT+INT(30-CR)*5:GOSUB560
890 PLAY"T255O4L4FL8FEDGR8L4FL8FEDGR8FEDGFEDG"
```

```
900 FORT=1TO3000:NEXT
910 SCREENO:GOTO1000
920 PUTSPRITE1,(FX,FY),6,1
930 LINE(20,100)-(235,110),1,BF
940 DRAW"BM40,102":PRINT#1,"DESTROZASTE TU NAVE"
950 PT=PT-INT(30-CR)*5:GOSUB560
960 PLAY"O2L8BL7AL6GL5FL4EL3DL2C"
970 FORT=1TO3000:NEXT
980 SCREENO
1000 LOCATE4,10:PRINT"OTRO ALUNIZAJE (S/N)"
1010 R$=INPUT$(1)
1020 IFR$<>"S"ANDR$<>"s"ANDR$<>"n"ANDR$<>"N"THEN1010
1030 IFR$="S"ORR$="s"THENSCREEN2:GOTO150ELSECLS
1040 LOCATE 4,10:PRINT"PARA EL SIGUIENTE PROGRAMA"
1050 LOCATE4,12:PRINT"PULSA PLAY EN EL CASSETTE"
1060 CLOAD
1070 END
```

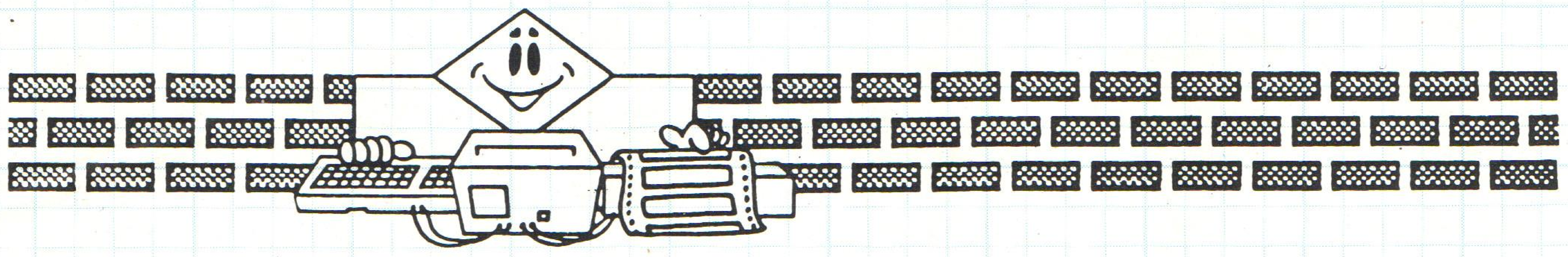




ORDENAMIENTO

```
10 ' PROGRAMA <<ORDENAMIENTO>>
20 '
30 COLOR 4,15,15:SCREEN 0:WIDTH 39:KEY OFF:OPEN"GRP:"AS1
40 RESTORE:FOR Z=1 TO 20:READA$:LOCATE 0,Z:PRINTA$:BEEP:NEXT
50 IF INKEY$="" THEN 50 ELSE CLS
60 LOCATE 0,10:INPUT"N. DE CASILLAS POR LADO (ENTRE 3 Y 8)          ";N:IF N<3 OR
N>8 OR N<>INT(N) THEN CLS:GOTO 60
70 CLS:LOCATE 1,11:PRINT"UN MOMENTO ESTOY PREPARANDO LA JUGADA"
100 A$="ABCDEFGHIJKLMNOPQRSTUVWXYZabcdefghijklmnopqrstuvwxyz0123456789."
110 NN=N*N:DIM A$(NN),B$(N,N):CT=1:FOR Y=1 TO N:FOR X=1 TO N
115 IF X=N AND Y=N THEN 130
120 B$(X,Y)=MID$(A$,CT,1)
130 CT=CT+1:NEXTX,Y:XV=N:YV=N
132 TIME=INT(RND(-TIME)*65536!)
135 FOR Z=1 TO NN*10:SX=INT(RND(1)+.5):SY=INT(RND(1)+.5):IF SX=0 THEN GOSUB 1600
 ELSE GOSUB 1500
137 IF SY=0 THEN GOSUB 1800 ELSE GOSUB 1700
140 NEXT
145 CT=1:FORY=1TON:FORX=1TON:A$(CT)=B$(X,Y):CT=CT+1:NEXTX,Y
150 COLOR 4,15,15:SCREEN 2
160 I=20:D=I+20*N:LINE(I-2,I-2)-(D+2,D+2),4,BF
165 DRAW"BM215,10C6G4E4F4H4D15BD6D15E4G4H4F4BM218,28R15H5F5G5E5L15BL6L15E4G4F4":
DRAW"BM201,162":COLOR 1:PRINT#1,"PARA":DRAW"BM185,172":PRINT#1,"TERMINAR":DRAW"B
M185,182":PRINT#1,"PULSA  Z":COLOR 4
167 DRAW"BM187,60":PRINT#1,"FICHAS:"
170 S=0:Y2=1:Y1=80:FOR Y=I+2 TO D STEP 20:X1=177:X2=0:FOR X=I+2 TO D STEP 20:LIN
E(X,Y)-(X+16,Y+16),15,BF:PLAY"T255L64N=S;":S=S+1:X1=X1+8:X2=X2+1
175 IF A$(S)<>"" THEN DRAW"BM=X;,=Y;BF5":PRINT#1,A$(S) ELSE LINE(X,Y)-(X+16,Y+16
),4,BF:XV=X2:YV=Y2
177 IF S<>NN THEN DRAW"BM=X1;,=Y1;":COLOR 13:PRINT#1,MID$(A$,S,1):COLOR 4
180 IF PLAY(1)=-1 THEN 180 ELSE NEXT:Y1=Y1+10:Y2=Y2+1:NEXT
190 DRAW"BM20,0":PRINT#1,"NUMERO DE MOVIMIENTOS:  0"
200 L$=INKEY$:IF L$="" THEN 200 ELSE L=ASC(L$):IF L=90 OR L=122 THEN 500 ELSE IF
 L<28 OR L>31 THEN 200
210 BEEP:IF L=28 THEN GOSUB 1000
220 IF L=29 THEN GOSUB 1100
230 IF L=31 THEN GOSUB 1200
240 IF L=30 THEN GOSUB 1300
250 NM=NM+1:LINE(196,0)-(255,9),15,BF:DRAW"BM196,0":PRINT#1,USING"###";NM
```

```
260 GOTO 200
500 LINE(183,10)-(255,191),15,BF:S=1:FOR Y=1 TO N:FOR X=1 TO N:IF S=NN THEN 510
505 IF B$(X,Y)<>MID$(A$,S,1) THEN X=2*N-1:Y=X
510 S=S+1:NEXT X,Y:IF X=2*N THEN DRAW"BM194,80":COLOR 1:PRINT#1,"NO ESTA":DRAW"B
M190,100":PRINT#1,"CORRECTO":PLAY"O2BAGFEDL2C":FOR T=1 TO 1000:NEXT:GOTO 600
520 DRAW"BM209,80":COLOR 13:PRINT#1,"MUY":DRAW"BM205,q00":PRINT#1,"BIEN":PLAY"t2
55164";FOR J=30 TO 50:PLAY"N=T;"::NEXT:FOR T=1 TO 1000:NEXT
600 LINE(183,10)-(255,191),15,BF:M1$="O  OTRA PARTIDA":M2$="F  FINALIZAR    ":DRA
W"BM205,20":PRINT#1,"PULSA":FOR Z=1 TO 15:ZZ=30+Z*10:DRAW"BM209,=ZZ;":PRINT#1,MI
D$(M1$,Z,1):DRAW"BM232,=ZZ;":PRINT#1,MID$(M2$,Z,1):NEXT
610 L$=INKEY$:IF L$="" THEN 610 ELSE IF L$="O" OR L$="o" THEN RUN ELSE IF L$="F"
 OR L$="f" THEN 700 ELSE 610
700 COLOR 15,4,4:SCREEN 0
710 LOCATE 4,10:PRINT"PARA EL SIGUIENTE PROGRAMA":LOCATE 4,12:PRINT"PULSA PLAY E
N EL CASSETTE"
720 CLOAD
730 END
900 IF INKEY$="" THEN 900 ELSE SCREEN 0:LIST 100-899
1000 IF XV=1 THEN PLAY"O2C":GOTO 1090
1010 SWAP B$(XV-1,YV),B$(XV,YV):XX=2+XV*20:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),
15,BF:DRAW"BM=XX;,=YY;BF5":PRINT#1,B$(XV,YV)
1020 XV=XV-1:XX=2+XV*20:LINE(XX,YY)-(16+XX,16+YY),4,BF
1090 RETURN
1100 IF XV=N THEN PLAY"O2C":GOTO 1190
1110 SWAP B$(XV+1,YV),B$(XV,YV):XX=2+XV*20:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),
15,BF:DRAW"BM=XX;,=YY;BF5":PRINT#1,B$(XV,YV)
1120 XV=XV+1:XX=2+XV*20:LINE(XX,YY)-(16+XX,16+YY),4,BF
1190 RETURN
1200 IF YV=1 THEN PLAY"O2C":GOTO 1290
1210 SWAP B$(XV,YV-1),B$(XV,YV):XX=2+XV*20:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),
15,BF:DRAW"BM=XX;,=YY;BF5":PRINT#1,B$(XV,YV)
1220 YV=YV-1:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),4,BF
1290 RETURN
1300 IF YV=N THEN PLAY"O2C":GOTO 1390
1310 SWAP B$(XV,YV+1),B$(XV,YV):XX=2+XV*20:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),
15,BF:DRAW"BM=XX;,=YY;BF5":PRINT#1,B$(XV,YV)
1320 YV=YV+1:YY=2+YV*20:LINE(XX,YY)-(16+XX,16+YY),4,BF
1390 RETURN
1500 IFXV=1THEN1510ELSESWAPB$(XV-1,YV),B$(XV,YV):XV=XV-1
1510 RETURN
1600 IFXV=NTHEN1610ELSESWAPB$(XV+1,YV),B$(XV,YV):XV=XV+1
1610 RETURN
1700 IFYV=1THEN1710ELSESWAPB$(XV,YV-1),B$(XV,YV):YV=YV-1
1710 RETURN
1800 IFYV=NTHEN1810ELSESWAPB$(XV,YV+1),B$(XV,YV):YV=YV+1
1810 RETURN
9000 DATA"      J U E G O   D E   O R D E N",," Este iuego consiste en colocar p
or",orden las letras del abecedario desde,"la A hasta la Z, pero para hacOrtelo"
,m s interesante hemos a$adido las,"min#sculas, los n#meros del 0 al 9 y"
9010 DATAun punto para terminar.,," Sin embargo, tu podr s elegir el",tama$o de
l solitario que desees resol-,"ver, entre 3x3 y 8x8 que hacen un total","de 9 y
64 fichas, respectivamente.",," Para realizar el movimiento de las"
9020 DATAfichas existe un espacio libre que,puede ser ocupado por las de su alre
-,dedor.,," PARA COMENZAR PULSA CUALQUIER TECLA"
```



CONDOR

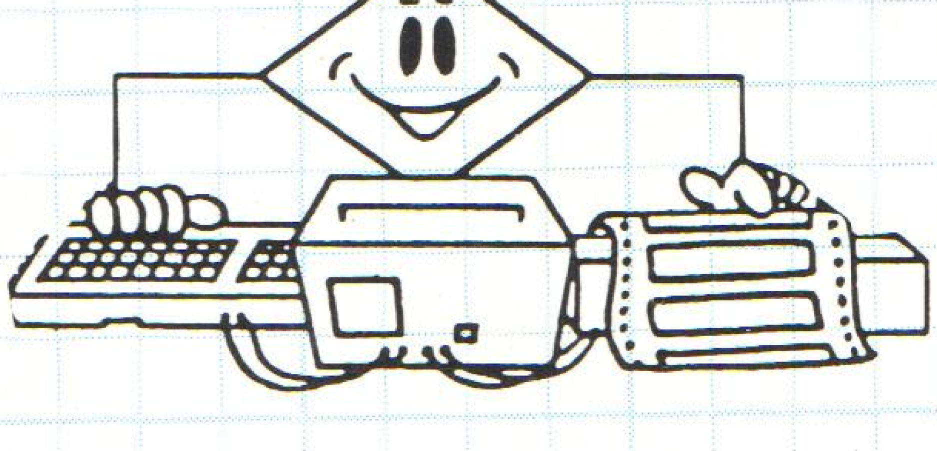
```
10 '
20 '
30 '        CONDOR
40 '
50 '     LUIS SANGUINO
60 '
70 '          1986
80 '
90 '
100 COLOR 9,5,11
110 SCREEN 3
120 OPEN"GRP:"AS #1
130 PRESET(40,80)
140 PRINT#1,"CONDOR"
150 FOR I=1 TO 2000:NEXT
160 CLOSE
170 COLOR 1,14
180 SCREEN 1:KEY OFF
190 LOCATE 5,10
200 PRINT"MANDO O TECLADO M/T"
210 A$=INKEY$
220 IF A$="M"OR A$="m"THEN V=1:GOTO 250
230 IF A$="T"OR A$="t"THEN V=0:GOTO 250
240 GOTO 210
250 DIM A(40)
260 COLOR 15,4,7
270 SCREEN 2,2
280 OPEN"GRP:"AS #1
290 DATA 11000000
300 DATA 01111000
310 DATA 11000000
320 REM
330 DATA 11100000
340 DATA 01110000
350 DATA 00111000
360 DATA 00101111
370 DATA 00111111
380 DATA 00000111
390 DATA 00000000
```

```
400 DATA 00000000
410 DATA 00000000
420 DATA 00000000
430 DATA 00000000
440 DATA 00000000
450 DATA 00000000
460 DATA 0000000Q
470 DATA 000000'0
480 DATA 00000000
490 REM
500 DATA 11111000
510 DATA 01101100
520 DATA 01111111
530 DATA 11010101
540 DATA 11111111
550 DATA 11111111
560 DATA 01111111
570 DATA 01111111
580 DATA 01101110
590 DATA 01001100
600 DATA 01111110
610 DATA 01110000
620 DATA 11100000
630 DATA 00000000
640 DATA 00000000
650 DATA 00000000
660 REM
670 DATA 00000000
680 DATA 00000000
690 DATA 01111000
700 DATA 11001111
710 DATA 11111100
720 DATA 11111000
730 DATA 0000000
740 DATA 00000000
750 REM
760 DATA 00010000
770 DATA 00111000
780 DATA 11101110
790 DATA 01111100
800 DATA 01000100
810 FOR I1=1 TO 3
820 READ C$
830 S$=S$+CHR$(VAL("&B"+C$))
840 NEXT I1
850  SPRITE$(1)=S$
860 FOR I2=1 TO 32
870 READ D$
880 T$=T$+CHR$(VAL("&B"+D$))
890 NEXT I2
900 SPRITE$(2)=T$
910 FOR I3=1 TO 8
920 READ E$
930 U$=U$+CHR$(VAL("&B"+E$))
```

```
940 NEXT I3
950 SPRITE$(3)=U$
960 FOR I4=1 TO 5
970 READ F$
980 V$=V$+CHR$(VAL("&B"+F$))
990 NEXT I4
1000 SPRITE$(12)=V$
1010 X=RND(-TIME)
1020 X1=0:Y1=0:X2=0:Y2=0:K=0:A=0
1030 XI=0:YI=0:XJ=0:YJ=0:K8=0
1040 KM=0:K3=0:K5=0:K6=0:K7=0
1050 KB=0:K1=0
1060 NT=0:NU=0:C1=0
1070 X=INT(RND(1)*80)+180
1080 LINE (0,15)-(255,0),13,BF
1090 FOR I=1 TO 15
1100 A(I)=INT(RND(1)*100)+5
1110 IF A<A(I) THEN A=A(I)
1120 NEXT I
1130 Y1=150:X2=25
1140 S=11
1150 FOR I=1 TO 15
1160 CV=(100*A(I))/A
1170 Y2=192-CV
1180 LINE (X1,Y1)-(X2,Y2),2
1190 IF X1>250 THEN 1200
1200 X1=X2:Y1=Y2
1210 X2=X2+X/10
1220 NEXT I
1230 PAINT(100,191),2
1240 YI=150:XJ=25
1250 FOR I=1 TO 15
1260 CI=(100*A(I))/A
1270 YJ=192-CI
1280 IF POINT(XI-9,YI-7)=2 AND POINT(XI+9,YI-7)=2 THEN 1360
1290 IF POINT(XI-6,YI-7)=2 AND POINT(XI+6,YI-7)=4 THEN XI=XI+6:YI=YI-8:XX=1:GOTO
 1310
1300 IF POINT(XI+6,YI-7)=2 AND POINT(XI-6,YI-7)=4 THEN XI=XI-6:YI=YI-8:XX=2
1310 IF XI>250 THEN 1360
1320 PSET(XI-3,YI-10),4
1330 PRINT#1," "
1340 IF XX=1 THEN XI=XI-6:XX=0:YI=YI+3
1350 IF XX=2 THEN XI=XI+6:XX=0:YI=YI+3
1360 XI=XJ:YI=YJ
1370 XJ=XJ+X/10
1380 NEXT I
1390 PSET(75,3)
1400 PRINT#1,"PUNTUACION =";PT
1410 P=-18:B=75
1420 IF K=0 THEN GOSUB 1720
1430 K=1
1440 FOR I=1 TO 300:NEXT
1450 N=225:NI=18
1460 DEFINT N,V,Y,X,K,P,B,H,R
```

```
1470 D=STICK(V)
1480 IF PZ=1 THEN LINE(175,2)-(212,10),13,BF: PSET (172,3),13:PRINT#1,PT:PZ=0
1490 N=N-2:NI=NI+1
1500 IF NI>=B THEN NI=B
1510 PSET(N,NI),4
1520 PRINT#1," "
1530 IF P<N AND P+26>N AND NI>B-6 THEN N=-1:GOSUB 2140
1540 IF POINT(N-4,NI+4)<>4 THEN NT=1
1550 P=P+2
1560 IF D=1 THEN B=B-2 :GOSUB 1670
1570 IF D=2 THEN B=B-2 :GOSUB 1670
1580 IF D=8 THEN B=B-2 :GOSUB 1670
1590 IF D=5 THEN B=B+2:GOSUB 1670
1600 IF D=4 THEN B=B+2:GOSUB 1670
1610 IF D=6 THEN B=B+2:GOSUB 1670
1620 IF D=7 THEN P=P-1:GOSUB 1670
1630 IF D=3 THEN KM=1
1640 IFK5=0 AND STRIG(V)=-1 THEN KB=1
1650 IFK6=0 AND STRIG(V)=-1 THEN KB=2
1660 IFK7=0 AND STRIG(V)=-1 THEN KB=3
1670 ON KB GOSUB 1990,2040,2090
1680 IF K5=1 THEN H=H+2: PUT SPRITE6,(P+21,H),1,1 :GOSUB 1990
1690 IF K6=1 THEN H1=H1+2: PUT SPRITE7,(P+16,H1),1,1:GOSUB 2040
1700 IF K7=1 THEN H2=H2+2: PUT SPRITE8,(P+7,H2),1,1:GOSUB 2090
1710 IF K8=1 THEN H3=H3+2: PUT SPRITE9,(P+2,H3),1,1:GOSUB 2160
1720 PUT SPRITE2,(P+1,B),14,2
1730 IF C1=0 THENPUT SPRITE3,(P+18,B),14,3
1740 'IF K=0 THEN RETURN
1750 IF POINT(P+23,B+6)=2 OR POINT(P+16,B+10)=2 OR POINT(P+9,B+15)=2 AND P>0 THE
N GOTO 2140
1760 IF KM=0 GOTO 1810
1770 ON KM GOSUB 1960
1780 IF K3=1 THEN R=R+4: PUT SPRITE 1,(R,B1),1,1
1790 IF R<N AND R+9>N AND NI-4<=B1 AND NI+5>=B1 THENBEEP: NT=1:R=256:PT=PT+25:PZ
=1
1800 IF K3=1 AND R>255 THEN PUT SPRITE 1,(500,201),1,1:K3=0:KM=0
1810 IF P+26>255 THEN C1=1:GOTO1820 ELSE 1900
1820 PUT SPRITE3,(275,200)
1830 IF P>245 THEN 1840 ELSE 1900
1840 CLS:PUT SPRITE2,(250,200)
1850 PUT SPRITE1,(100,200)
1860 PUT SPRITE6,(0,200)
1870 PUT SPRITE7,(10,200)
1880 PUT SPRITE8,(20,200)
1890 PUT SPRITE9,(30,200):GOTO 1020
1900 IF B<20 THEN B=20
1910 LINE(N-4,NI+8)-(N+6,NI-2),4,BF
1920 LINE(NJ-4,NK+8)-(NJ+6,NK-2),4,BF
1930 IF NT=1 THEN N=250:NI=17:NT=0
1940 IF NU=1 THEN NJ=225:NK=25:NU=0
1950 GOTO 1470
1960 IF K3=1 THEN 1980
1970 BEEP: R=P+24:B1=B+3:K3=1
```

```
1980 RETURN
1990 IFK5=1 THEN 2010
2000 BEEP:H=B+5:K5=1
2010 IF POINT (P+24,H+3)=2 THEN K5=0:PUT SPRITE 6,(200,200),1,1:KB=0:H=200
2020 IF POINT (P+24,H+3)=15 OR POINT(P+24,H+4)=15 OR POINT(P+20,H+2)=15 THEN K
0:PUT SPRITE 6,(200,200),1,1:KB=0:BEEP:LINE(P+16,H-3)-(P+30,H+10),4,BF:PT=PT+1
:PZ=1:H=200
2030 RETURN
2040 IF K6=1 THEN 2060
2050 BEEP: H1=B+10:K6=1
2060 IF POINT (P+20,H1+3)=2 THEN K6=0:PUT SPRITE 7,(20,200),1,1:KB=0 :H1=200
2070 IF POINT (P+20,H1+3)=15 OR POINT(P+20,H1+4)=15 OR POINT(P+16,H1+2)=15 TH
K6=0:PUT SPRITE 7,(20,200),1,1:KB=0:BEEP:LINE(P+12,H1-3)-(P+26,H1+10),4,BF :P
T+10:PZ=1:H1=200
2080 RETURN
2090 IF K7=1 THEN 2110
2100 BEEP: H2=B+10:K7=1
2110 IF POINT (P+9,H2+3)=2 THEN K7=0:PUT SPRITE 8,(30,200),1,1:KB=0:H2=200
2120 IF POINT (P+9,H2+3)=15 OR POINT(P+9,H2+4)=15 OR POINT(P+6,H2+2)=15 THEN
0:PUT SPRITE 8,(30,200),1,1:KB=0:BEEP:LINE(P+2,H2-3)-(P+15,H2+10),4,BF :PT=PT
:PZ=1:H2=200
2130 RETURN
2140 PLAY "T170M101V15L1C","M101V15L2E","T190M101V15L1D"
2150 FOR I=1 TO 15 STEP 2
2160 CIRCLE(P+13,B+6),I,9
2170 CIRCLE(P+14,B+5),I,10
2180 NEXT I
2190 PUT SPRITE2,(250,200)
2200 PUT SPRITE3,(275,200)
2210 FOR I=1 TO 800:NEXT
2220 COLOR 1,14
2230 SCREEN 0 :WIDTH 38:KEY OFF
2240 LOCATE 3,5:PRINT"LO SIENTO TE HAN DERRIBADO"
2250 LOCATE 3,10:PRINT"TU PUNTUACION HA SIDO =";PT
2260 LOCATE 3,15:PRINT "QUIERES JUGAR OTRA VEZ S/N"
2270 A$=INKEY$
2280 IF A$="S" OR A$="s"THEN CLEAR:GOTO 170
2290 IF A$="N" OR A$="n"THEN GOTO 2310
2300 GOTO 2270
2310 CLS
```



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N.º 16 - 690 Ptas.

AMSTRAD

AIRATACK

CURSO DE
BASIC +
MICROORDENADORES

prácticas con...

Microordenador
ZX SPECTRUM

Microordenador
COMMODORE

Microordenadores
AMSTRAD, MSX, PC

Para saber cómo hablar con los ordenadores

El Curso CEAC a Distancia, BASIC + Microordenadores, le va a introducir paso a paso, con un cuidado método, en uno de los temas más apasionantes de nuestros días: **la programación de ordenadores.**
Al aprender PRACTICANDO desde un principio a programar BASIC, lenguaje diseñado especialmente para dar los primeros pasos en programación, estará sentando las bases para el estudio de cualquier otro lenguaje de alto nivel.

Curso CEAC de BASIC + Microordenadores: un diálogo permanente con el ordenador.

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- Electrónica (con experimentos)
- Contabilidad
- Fotografía
- Curso de Video
- Decoración

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